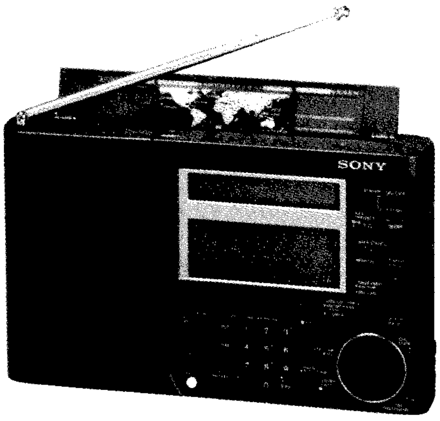
ICF-SW77

SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model



SPECIFICATIONS

Circuit system
FM: Single conversion superheterodyne
AM: Dual conversion superheterodyne

Frequency range

Type	Frequency coverage			
	FM*	LW	MW	SW
1	76.0–108MHz	150 ———	———	— 29,999.9kHz
2	87.5–108MHz	150 ———	———	— 29,999.9kHz
3	87.5–108MHz	150–285kHz	531 ———	— 26,100kHz
4	87.5–108MHz	150–285kHz	531–1,602kHz	3,850–26,100kHz

*Stereo reception when using stereo earphones

Type 1: Countries that are not listed below
Type 2: Germany, Austria, and Scandinavian countries
Type 3: Saudi Arabia
Type 4: Italy

Intermediate frequency
FM:10.7MHz
LW/MW/SW: 55.845MHz (first)
455kHz (second)

Antennas
FM/SW: Telescopic antenna
MW/LW: Built-in ferrite bar antenna

Speaker
Approx. 125 × 77 mm (5 × 3 in.)
8Ω

Power output
400 mW (at 10 % harmonic distortion)

Outputs
Recording output jack (stereo minijack)
Output level 138 mV
(–15 dB)
Output impedance less than 10 kilohm
Earphone jack (stereo minijack)

Power requirements
6 V DC
Four R14 (size C) batteries
DC IN 6 V jack accepts:
- supplied AC power adaptor (except for Australian model)

Where purchased	AC power adaptor	Operating voltage
US model	AC-E604	120 V AC, 60 Hz
Canadian model	AC-E602	110 – 120 V/ 220 – 120 V AC, adjustable, 50/ 60 Hz
UK model	AC-E603	240 V AC, 50 Hz
AEP, E Australian model	AC-E600	110 – 120 V/ 220 – 120 V AC, adjustable, 50/ 60 Hz

- DCC-E160L car battery cord (not supplied) for use with 12 V car battery

Battery life
Approx. 20 hours (FM reception)
Approx. 12 hours (AM reception)
of listening for fours hours a day at a normal volume, using Sony SUM-2(NS) batteries.

– Continued on next page –

LW/MW/SW/FM STEREO PLL SYNTHESIZED RECEIVER

SONY®

MICROFILM

Dimensions	276 × 172.5 × 46.5 mm (w/h/d) ($10\,^{11}/_{8} \times 6\,^{13}/_{16} \times 1\,^{13}/_{16}$inches) including projecting parts and controls with antenna retracted
Weight	Approx. 1.48 kg (3 1/4 lb) including batteries
Accessories supplied	AC power adaptor* (1) AC plug adaptor* (1) Stereo earphones (1) Ear pad (2) Carrying belt (1) SW compact antenna (1) External antenna connector (1) "Wave Handbook" (1) "How to Catch the Wave" (1) "Preset Frequency List" *Not provided with certain models

Design and specifications subject to change without notice.

Note
This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

The ICF-SW77 is available in various models with differences in frequency coverage and other variances, corresponding to the regulations of different countries.
The main differences are shown in the following table. Please check the type of your unit with respect to each item. The AM (LW/MW/SW) and FM frequency ranges are indicated inside the top panel of your unit.

Despite the above differences, the operating procedure of all the units are identical. The differences are clearly described in the text as required.

Type	Frequency coverage			
	FM	LW	MW	SW
1	76.0–108 MHz	150 ———	———	— 29,999.9 kHz
2	87.5–108 MHz	150 ———	———	— 29,999.9 kHz
3	87.5–108 MHz	150–285 kHz	531———	— 26,100 kHz
4	87.5–108 MHz	150–285 kHz	531–1,602 kHz	3,850–26,100 kHz

Type	SSB reception
1	Provided
2	Provided
3	Not provided (No SSB key)
4	Provided

Features

- An LW/MW/SW/FM portable receiver with worldwide band coverage.
- Quartz controlled PLL (Phase Locked Loop) synthesizer system using a microcomputer makes pinpoint tuning easy.
- FM stereo reception for earphones.
- Smooth tuning with rotary manual tuning dial.
  For AM reception, you can tune in by 50 Hz interval when you select "SLOW" for the tuning interval.
- Synchronous detector circuit reduces interference from adjacent stations (beats) and distortion due to fading in AM reception.

- Choice of Preset Stations direct, manual, or scan tuning.

  Preset Station Tuning...Tuning in a station by selecting the name of the preset station. (Page 12)
  Direct tuning...Tuning in the station by inputting the frequency of the station directly. (Page 16)
  Manual tuning...Tuning in the station by turning the dial. Even if you don't know the frequency of the station, you can tune in the station precisely. (Page 18)
  Scan tuning...Searching for a station automatically. (Page 20)

- Up to 162 frequencies can be memorized for Preset Station Tuning. You can edit them in any desired order. (Page 21)

  - Program Time can be memorized in the Preset Station, which enables the unit to choose the tuning frequency automatically depending on the time.
  - You can label the Preset Station with a Station Name.
  - AM mode can also be memorized. .

- Several stations on the Tuning Page are already preset in this unit at the factory.

- Other features

  Clock display...You can select from local time or UTC (Universal Time Coordinated) time indication. (Page 9)
  5 sets of timer ...You can preset a desired station to be received at a desired time. (Page 27)
  Sleep timer...You can make the radio turn off automatically after 60, 30, or 15 minutes. (Page 26)
  Three different power sources...Internal batteries, house current, or car battery. (Page 8)

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

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SECTION 1
SERVICING NOTES

[Note on Repairing Microcomputer Board]

The user's program schedule data is memorized in E^{2}PROM IC806.

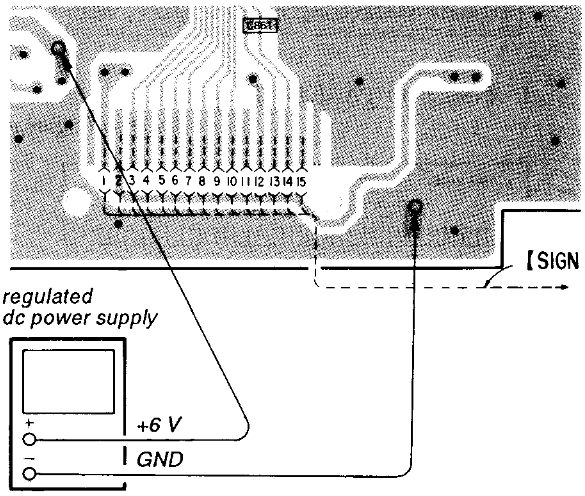
When repairing by the microcomputer board replacement, unsolder IC806 on the user's board and solder it on the new board.

[Microcomputer Board Checking]

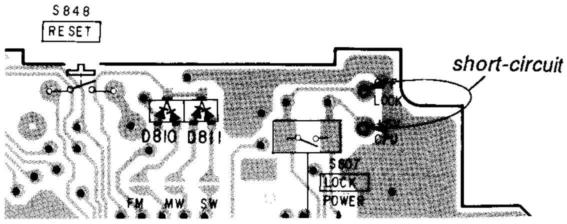
Checking the microcomputer board alone is possible.

1) Disconnect the flexible board from CN401 on the signal board.
2) Connect +6 V and ground to the points on the microcomputer board in the following figure.
3) Short-circuit between +3VCPU and OFF LOCK lands (OFF LOCK key ON state).
4) Short-circuit TST lands.
5) Pressing S806 ON/OFF key turns the microcomputer board on or off.
6) Release the shorted TST, +3VCPU, and OFF LOCK lands.

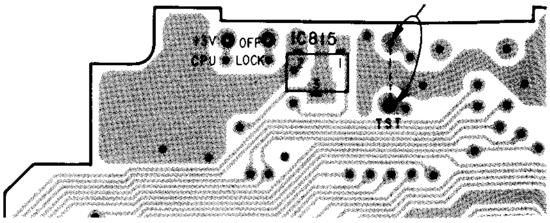
- **POWER SUPPLY**
  [MICROCOMPUTOR BOARD]
  – Component Side –



- **+3VCPU – OFF LOCK LANDS**
  [MICROCOMPUTOR BOARD]
  – Component Side –



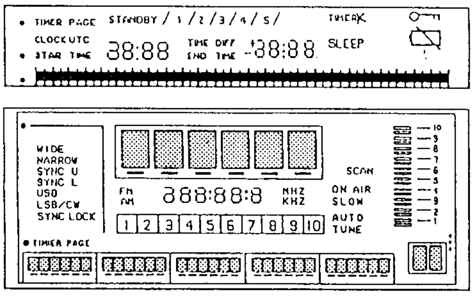
- **TST LANDS**
  [MICROCOMPUTOR BOARD]
  – Component Side –



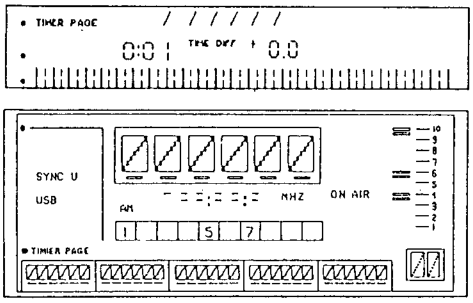
[LCD802 Replacing Procedure]

Perform in the order given.

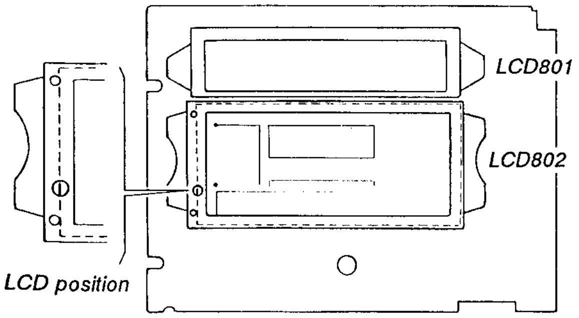
1. Remove the microcomputer board and the key board the set.
2. Short-circuit between +3VCPU and OFF LOCK lands.
3. Short-circuit TST lands.
4. Connect lead wires for the power supply.
5. Confirm LCD 802 indication.
   a. Apply +6 V to the lead wire.
   b. Press S806 (ON/OFF key) ·········· POWER ON
   c. Press S848 (RESET key) ···················· RESET
   d. Press S846 (FM key) on the key board ········ FM
   e. While pressing S829 (METER BAND key), press S840 (PAGE FEED $\overset{+}{\Uparrow}$ key) ·· LCD all lights up


TIMER PAGE
STANDBY / 1 / 2 / 3 / 4 / 5 /
CLOCK UTC
START TIME
38:88
TIME OFF
END TIME
38:88
SLEEP
WIDE
NARROW
SYNC U
SYNC L
USB
LSB/CW
SYNC LOCK
FM
AM
888:88:8
MHZ
KHZ
SCAN
ON AIR
SLOW
AUTO
TUNE
1 2 3 4 5 6 7 8 9 10
TIMER PAGE

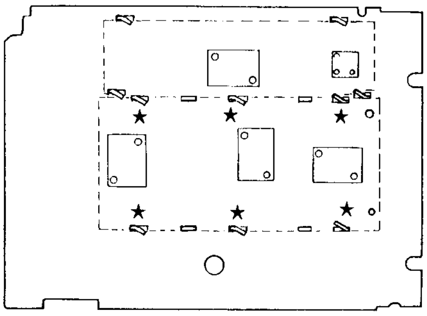
   f. Press S840 (PAGE FEED $\overset{+}{\Uparrow}$ key) ······ LCD half lights up


TIMER PAGE
TIME OFF
SYNC U
USB
AM
MHZ
ON AIR
5
7
TIMER PAGE

6. Confirm the LCD position by looking the hole on the left side of the LCD holder.

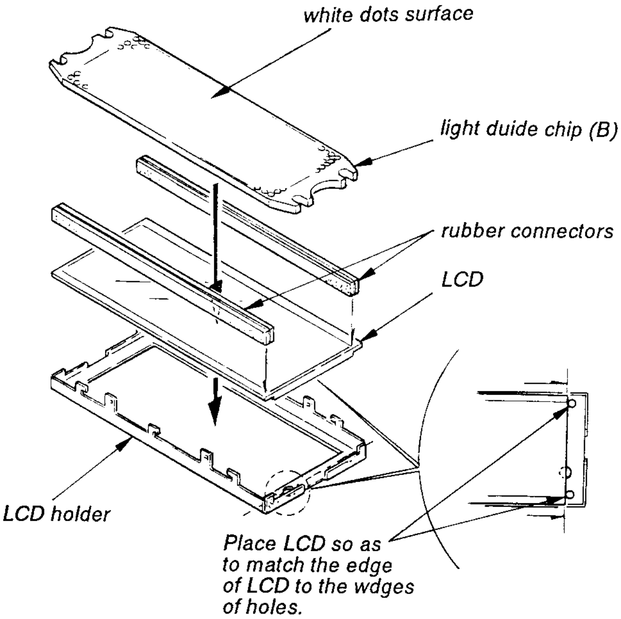

LCD801
LCD802
LCD position

7. Remove LCD802 by loosening 6 twisted portion (★ mank) of the LCD holder.



MICROCOMPUTER board

8. Place in the order, LCD holder, LCD, rubber connectors, light guide chip (B) in its position confirmed in the item 6.


white dots surface
light duide chip (B)
rubber connectors
LCD
LCD holder
Place LCD so as to match the edge of LCD to the wdges of holes.

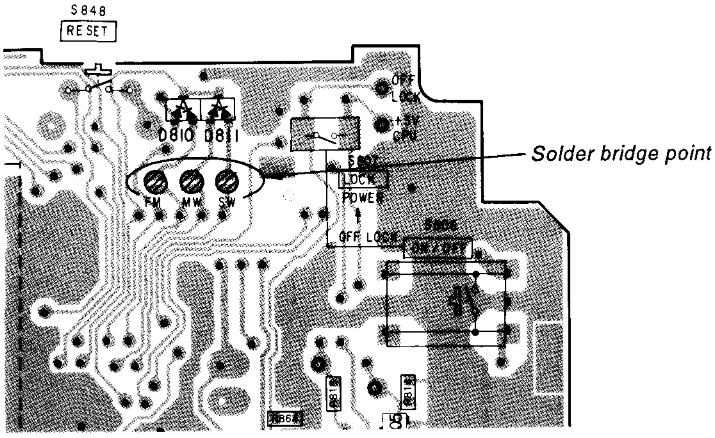
LCD and LCD holder positionings

9. Place the microcomputer board on LCD assembled in the item 8 and twist 6 portion for stopper of LCD holder.
10. Confirm LCD indication (Item 5 a to f).
11. When the indication goes out of order, repeat the items 7 to 10 again.

[Points of the Frequency Coverage Adjustment]

The soldering on the bridge patterns FM, MW, or SW on the microcompuetr board realizes to change the frequency coverage.

[MICROCOMPUTOR BOARD]
– Component Side –


S848
RESET
D810
D811
FM
MW
SW
OFF LOCK
+3V CPU
S807
LOCK
POWER
OFF LOCK
S806
ON/OFF
Solder bridge point

Type	Frequency Coverage				Solder bridge point		
	FM	LW	MW	SW	FM	MW	SW
1	76 – 108 MHz	150 ——	——→	29,999.9 kHz	OPEN	OPEN	OPEN
2	87.5 – 108 MHz	150 ——	——→	29,999.9 kHz	SHORT	OPEN	SHORT
3	87.5 – 108 MHz	150 → 285 kHz	531 ——→	26,100 kHz	SHORT	OPEN	SHORT
4	87.5 – 108 MHz	150 → 285 kHz	531 → 1,602 kHz	3,850 → 26,100 kHz	SHORT	SHORT	SHORT

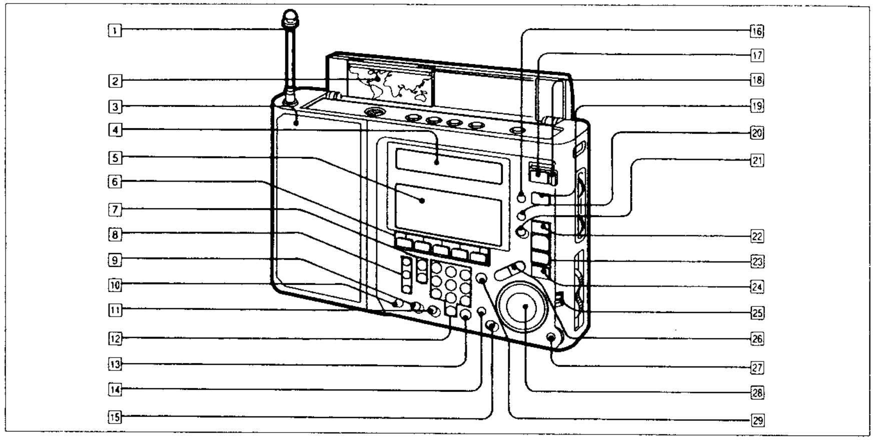
SECTION 2
GENERAL

This section is extracted from instruction manual.

Location and Function of Controls

Refer to the pages indicated in ● for details.

Front Panel

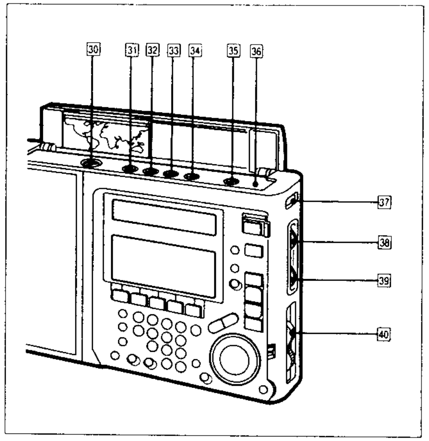


1 Telescopic antenna
2 World time scale ⑩
3 Speaker
4 Clock/timer display (for clock) ⑥
5 Frequency display (for radio) ⑥
6 S1, S2, S3, S4, S5 (station) buttons
7 Band selectors
FM button
AM button
8 MODE (AM mode) selectors ⑱
WIDE/NARROW button
SYNC button
SSB button
9 TIMER CHECK/ERASE button ㉔ ㉘
10 LIGHT button
Press to illuminate the display window for about 15 seconds.
11 ENTER button ㉑
12 DIRECT TUNE/TIME INPUT numeric buttons ⑯ ㉑
13 EXE (execute) button ⑯ ㉑
14 SCAN/AUTO TUNE button ⑳ ㉖
15 METER BAND button ⑳
16 KEY PROTECT ⊶ button ⑪
17 ON/OFF (power) button
18 POWER/LOCK switch
Set this switch to POWER, then press the ON/OFF button to turn on the radio. Set the switch to LOCK when carrying the radio. When this switch is set to LOCK, the power will not be turned on even if you press the ON/OFF button.
19 SLEEP (sleep timer) button ㉖
20 TIMER STANDBY button ㉗

21 RESERVE button ㉗
22 TIMER PAGE button ⑭
23 PAGE FEED INS CHR/DEL CHR + ⇧/– ⇩ buttons ⑫ ㉒
Used for changing the Tuning Page or inserting or deleting characters of the Station Name.
24 QUICK PAGE button ⑬
25 DIAL LOCK switch ⑱
26 MEMORY FREQ/METER BAND/CURSOR ⇦ ⇨ buttons ⑯ ⑳ ㉒
27 AM FAST/SLOW selector ⑱
28 DIAL TUNE/JOG dial
29 EDIT button ㉑

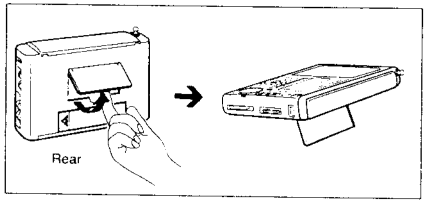
What are the yellow and white dots marked beside the names of the buttons?
Some buttons or dials have more than one function. Yellow and/or white dots are marked beside the name of these buttons. For example, the TIMER CHECK/ERASE button has two functions. The function preceded by the yellow dot works only when the EDIT button (also marked by a yellow dot) is pressed. The function preceded by a white dot works only when the METER BAND button (also marked by a white dot) is pressed.

Top panel / Side panel

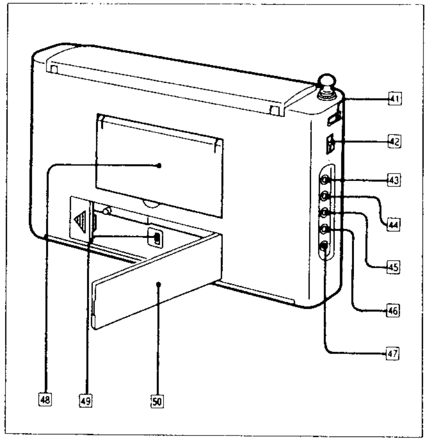


30 LCD CONTRAST dial ⑪
31 TIME SET LOCAL button ⑨
32 TIME SET TIME DIFF.(difference) button ⑨
33 TIME/PROGRAM selector
Each time you press this button, the clock/timer display changes between the current time and the Program Time (starting time and ending time) indications.
34 LOCAL/UTC selector ⑨
35 FREE button ㉓ ㉕
36 RESET button
Press this button when other buttons do not function.
37 Holes for the carrying belt
38 TREBLE control ⑪
39 BASS control ⑪
40 VOLUME control ⑪

How to use the stand



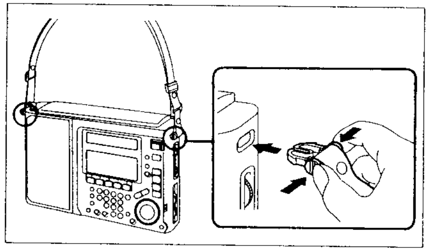
Rear panel



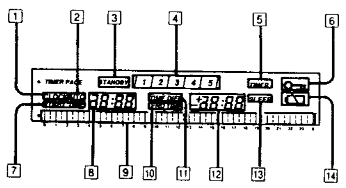
41 Holes for the carrying belt
42 SENS (sensitivity) selector
43 AM EXT ANT (external antenna) jack ㉙
44 TAPE REMOTE jack ㉚
45 TAPE LINE OUT jack ㉚
46 Ω (earphones) jack
47 DC IN 6V ⊖-◐-⊕ (external power input) jack
48 Stand
49 9 kHz/10 kHz (MW channel step) selector (inside the battery compartment) ⑦
50 Battery compartment lid ⑧

How to attach the carrying belt

Attach the supplied carrying belt as illustrated below.

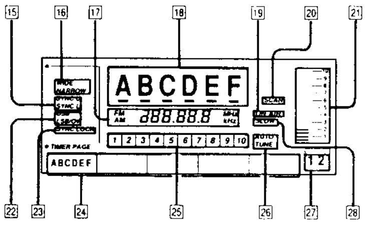


Clock/Timer Display



- 1 CLOCK indication
  Flashes while setting the current time.
- 2 UTC indication
  Appears when the current UTC (Universal Time Coordinated) time is shown.
- 3 STANDBY (timer standby) indication
  Appears when the timer is reserved.
- 4 Timer numbers
  Appears when each of the timers is reserved.
- 5 TIMER indication
  Appears when the radio is activated by the timer.
- 6 Key protect indication
  Appears when the keys are locked.
- 7 START TIME indication
  Appears when the starting time of the timer or program time is shown.
- 8 Current local time/current UTC time/starting time
- 9 Program Time indicating bar
- 10 END TIME indication
  Appears when the ending time of the timer or program time is shown.
- 11 TIME DIFF indication
  Appears when the time difference is shown.
- 12 Time difference/ending time/remaining time for timer and sleep timer
- 13 SLEEP indication
  Appears when the sleep timer is operating.
- 14 Battery empty indication

Frequency Display

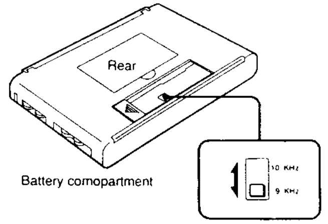


- 15 SYNC U/L (SYNC mode) indication
- 16 WIDE/NARROW (selectivity) indication
- 17 Band and frequency indication
- 18 Station Name area
- 19 ON AIR indication
  Appears when you receive a station during its broadcasting time (Program Time).
- 20 SCAN indication
  Appears during scan tuning.
- 21 SIGNAL METER (signal strength meter)
- 22 USB/LSB/CW (SSB mode) indication
- 23 SYNC LOCK indication
  Appears when synchronous detection is performed.
- 24 Station selection line
- 25 Frequency numbers
- 26 AUTO TUNE indication
  Appears when you set the Auto Tune function and during Auto Tune scan tuning.
- 27 Page number
- 28 SLOW indication
  Appears when you select "SLOW" for the manual tuning interval (for AM).

How to Change the MW Channel Step

The MW channel step is factory-set to 9 (or 10) kHz to match the frequency allocation system of the country. If you use the radio where the frequency allocation system is based on a 10 (9) kHz interval, set the MW channel step selector in the battery compartment to 10 (9) kHz by following the procedure below.

1 Set POWER/LOCK to LOCK.
2 Open the battery compartment and take out the batteries.
3 Set the 9 kHz/10 kHz selector to the appropriate channel step.
4 Install the batteries and close the battery compartment.



The frequency allocation of the area

Area	Frequency allocation system
North America, South America	10 kHz step
Other countries	9 kHz step

Note

You must change the MW channel step within 5 minutes. If more than 5 minutes elapses after the batteries are removed, the clock setting (page 9) and the data in the Quick Page (page 13) will be erased. In this case, set them again.

Power Sources

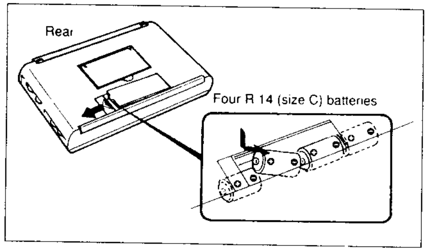
Batteries

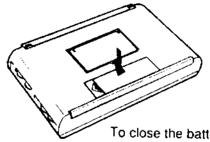
Use four R14 (size C) batteries.

Battery installation

Note
Before installing the batteries, be sure to check that the MW channel step selector is set correctly. (See page 7.)

Install the batteries with correct polarity as illustrated below.




To close the battery compartment

Notes on batteries

- This unit cannot be operated on the internal batteries when the AC power adaptor or car battery cord is connected to the DC IN 6V jack.
- Even when the unit is not to be used for a long period of time or is to be operated extensively on other power sources, keep the batteries installed to back up the clock and the built-in computer.

Battery replacement

- When the batteries are exhausted, the sound becomes weak or distorted, and the ⊂⊐ (battery empty) indication flashes on the clock/timer display. In this case, replace all the batteries with new ones.
  Even after you replace the batteries, ⊂⊐ remains flashing. To turn off ⊂⊐, press ON/OFF.
- Replace the batteries within 5 minutes. Otherwise, the current time, the Quick Page settings, and the reservation for the timer will be erased. However, the data on the Tuning Pages and Timer Pages will not be erased.

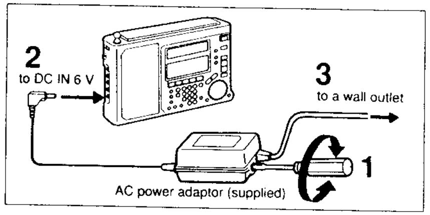
House Current (except the models for Australia)

Use the supplied AC power adaptor.

Connect the AC power adaptor to DC IN 6V and the other end to a wall outlet as illustrated below.

Note (except the models for U.K.)
Before connecting the AC power adaptor, be sure to set the voltage of the adaptor to your local power line voltage with a screwdriver as illustrated.

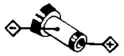
For customers supplied with an AC plug adaptor
Use the AC plug adaptor if the AC power adaptor does not match the outlet.



Note on the AC power adaptor

Use only the supplied AC power adaptor (except the models for Australia). Do not use any other AC power adaptor.

Polarity of the plug

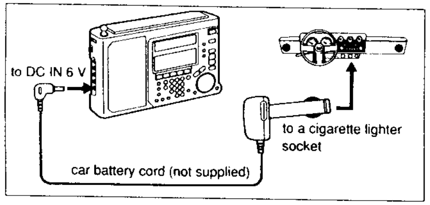


12 V car battery

Use the Sony DCC-E160L car battery cord (not supplied).

Connect the car battery cord to DC IN 6 V and the other end to a cigarette lighter socket of the car as illustrated below.

Note
When the AC power adaptor or car battery cord is connected to the DC IN 6 V jack, the internal batteries (if present) are automatically disconnected.

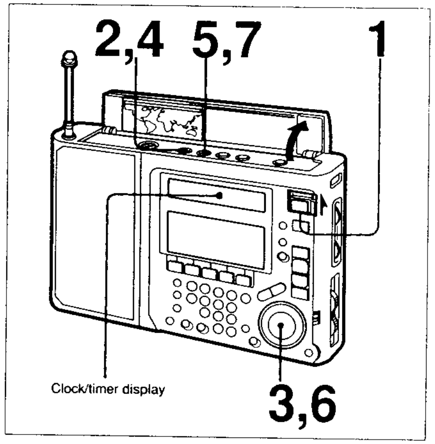

to DC IN 6 V
to a cigarette lighter socket
car battery cord (not supplied)

Setting the Clock

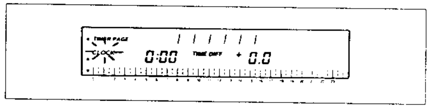
This unit is factory-set with the data for Preset Station Tuning which includes time data (page 15). For tuning in correctly, you need to set the correct local time and correct time difference from the UTC (Universal Time Coordinated) time.

Before setting the clock, check the time difference between the local time in your area and the UTC time by referring to the table on the next page.

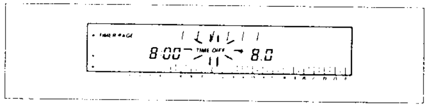
How to Set the Clock



1 Set POWER/LOCK to POWER.
2 Press and hold LOCAL.
The CLOCK indication flashes.



3 Turn the DIAL TUNE/JOG dial to adjust the current local time while CLOCK is flashing.
4 Release LOCAL.
5 Press and hold TIME DIFF.
The TIME DIFF. indication flashes.



6 Turn the DIAL TUNE/JOG dial to adjust the time difference while TIME DIFF. is flashing.
7 Release TIME DIFF.

Zero second adjustment

If you want to adjust the time exactly to the second with a telephone time signal, proceed as in the following example.
Example: To set to 15:15

1. Adjust the time indication to 15:15 and keep LOCAL depressed.
2. Release LOCAL simultaneously with the telephone time signal. The clock begins to show the precise time.

Notes on the time indication

- Each time you press the UTC/LOCAL button, the current time indication changes between the UTC time and the local time.
- You cannot set the clock by adjusting the UTC time.
- Each time you press the TIME/PROGRAM button, the clock/timer display changes between the current time and Program Time (starting time and ending time) indications.

Difference between local time and UTC (universal time coordinated) time

The table below shows the difference between the local time and the UTC time in each area. The differences marked with a plus sign (+) indicate the number of hours ahead of the UTC. The differences marked with a minus sign (–) indicate the number of hours behind the UTC. If there is no difference between the local time and the UTC, "+0.0" is indicated.
To see the time difference during the period for daylight saving time or "Summer Time" (if necessary), add one hour to the difference indicated in the table.

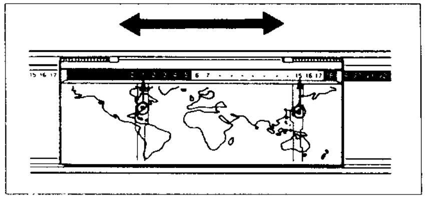
Area	Time difference
Australia	
(Sydney)	+10
(Darwin)	+9 1/2
(Perth)	+8
Austria	+1
Belgium	+1
Brazil	
(Manaos)	–4
(Rio de Janeiro)	–3
Canada	
(Vancouver)	–8
(Calgary)	–7
(Montreal)	–5
Canary Isl.	UTC (+0)
Chile	–4
China (P.R.)	
(Beijing)	+8
Denmark	+1
Ecuador	–5
Egypt	+2
Fiji	+12
Finland	+2
France	+1
Germany	+1
Greece	+2
Hawaii	–10
Hong Kong	+8
India	+5 1/2
Indonesia	
(Jakarta)	+7
Iran	+3 1/2
Italy	+1
Japan	+9
Kenya	+3
Korea (D.P.R.)	+9
Malaysia	+8
Mexico	
(Mexico City)	–6
(Tijuana)	–8
Netherlands	+1
New Zealand	+12
Norway	+1
Pakistan	+5
Panama	–5
Peru	–5
Philippines	+8
Poland	+1
Portugal	UTC (+0)
Saudi Arabia	+3
Singapore	+8
Spain	+1
Sri Lanka	+5 1/2
Sweden	+1
Switzerland	+1
Taiwan	+8
Thailand	+7
United Kingdom	UTC (+0)
USA	
(New York)	–5
(Dallas)	–6
(Denver)	–7
(Los Angeles)	–8
(Anchorage)	–9
USSR	
(Moscow)	+3

***Notes on the time difference from the UTC time**

- The UTC (Universal Time Coordinated) time is set according to the time difference and the current local time. Always adjust the local time first and then the time difference. Do not adjust the time difference before adjusting the local time.
- The local time will not change by adjusting the time difference. When you move from one place to another, or when your area enters summer time period, adjust the local time, not the time difference. This way, the time difference will be adjusted automatically.
- The UTC time, local time, and the time difference are related to each other as follows:
  (Time difference) = (Local time) – (UTC time)

How to use the world time scale

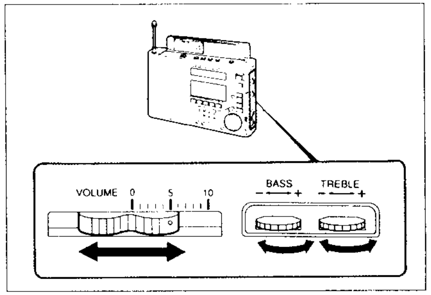
You can check the local time of a desired area by using the world time scale.



Example:
To check the local time in New York when you are in Tokyo
1 Check the current local time in the area you are in. (e.g. 15:00 in Tokyo)
2 Move the scale so that the current time is above the area you are in.
3 Look for the area where you want to know the time. The number above the area shows its local time.

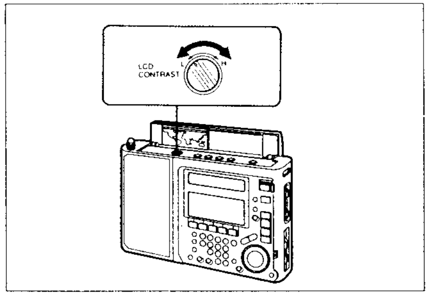
Tips for Better Reception

Volume and Tone Control



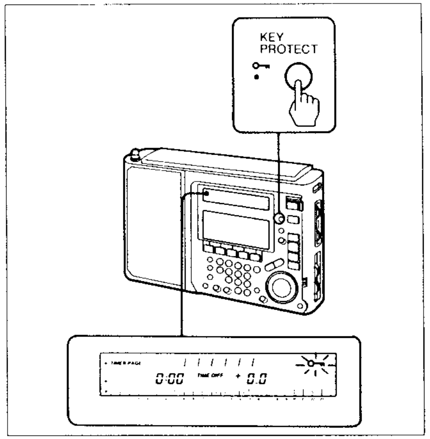
Adjust the volume with the VOLUME control, and the bass and treble with the BASS and TREBLE controls.

Adjusting the Display Contrast



Turn the LCD CONTRAST dial.
For weak contrast, turn towards L.
For sharp contrast, turn towards H.
You can adjust the contrast of the Station Name area, Station selection line, and the Page number display.

Key Protection



Press KEY PROTECT ⊶.
⊶ appears on the clock/timer display. While it is displayed, all the buttons and dial are locked.
This prevents accidental change of the received station.

To release the key protection, press KEY PROTECT ⊶ again.

Preset Station Tuning

Once the frequencies of the stations has been saved, you can tune in these stations easily by using Preset Station Tuning. The saved station can be tuned in by selecting the "Station Name" on each "Preset Page." Each Preset Page can hold up to 5 Stations Names.
There are three kinds of "Preset Pages" in Preset Station Tuning:

- Tuning Pages (1 to 20)
- Quick Pages (Q1 and Q2)
- Timer Page (TP)

How to Tune in by Selecting a Preset Station Name

The **Tuning Pages (1 to 20)** can hold up to 20 Pages, with 5 Station Names on each Page, therefore 100 Station Names in total. One Station Name can hold up to 10 "Frequencies" (see page 15), but in total, 162 Frequencies can be memorized on the Tuning Pages. When you select a Station Name, one of the 10 "Frequencies" is tuned in. The Station Names are displayed in capital letters; e.g. "ABC".

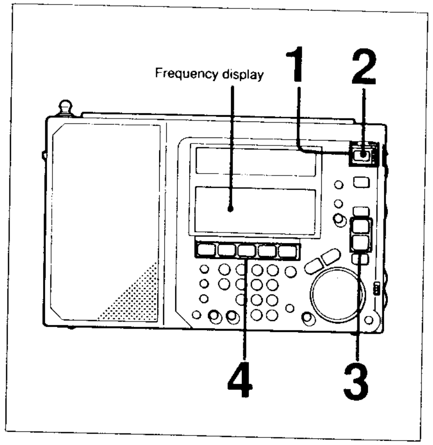
The **Quick Pages (Q1 and Q2)** can hold 2 Pages, with 5 Station Names or 5 frequency numbers on each Page, therefore 10 stations in total.
Quick Pages appear to be very similar to Tuning Pages, but since there are only 2 Pages, you can tune in a station more quickly. Quick Page can memorize a Station Name that you saved on the Tuning Page or any frequency that you tune in. Another difference is that the stations on Quick Pages are memorized by overwriting onto the previously memorized station. (See page 23 for details.) Quick Page is also suitable for temporary use, as a memorandum of a frequency number. The Station Names are displayed in small letters; e.g. "abc."

The **Timer Page (TP)** has one Page, therefore 5 Station Names in total. Each Station Name on the Timer Page has only 1 "Frequency." Timer Page can be used to memorize stations for timer operation (turning on and off of the radio at a specified time). The Station Names are displayed in capital letters; e.g. "ABC".

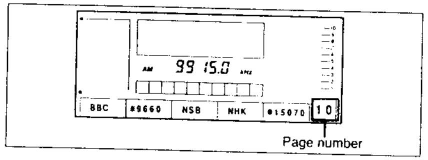
Several stations on the Tuning Page are already preset in this unit at the factory. Therefore, you can tune in a Preset Station by following the instructions on the right before memorizing stations of your own choice. To memorize the stations, go on to the next section to learn how to tune in a station by direct, manual or scan tuning and read the section "Memorizing and Editing Stations" section from page 21.

Notes
- The stations on the Quick Page and the Timer Page are not preset at the factory. Read the section from page 21 and save the stations you want for more details.
- Refer to the supplied "Wave Handbook" for details about the factory-preset stations.

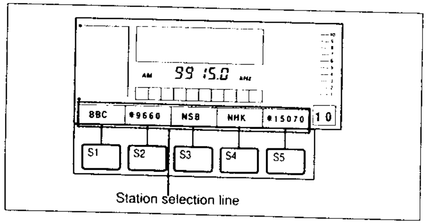
To receive a preset station on a Tuning Page



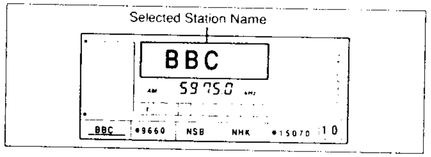
1 Set POWER/LOCK to POWER.
2 Press ON/OFF.
The indications on the frequency display appear.
3 Press PAGE FEED + ⇧ or – ⇩ to select the desired Page number (from 1 to 20)*.
Each time you press + or –, the page number changes.



4 Select the the desired station from the 5 Station Names on the Station selection line, and press the Station Number button (S1, S2, S3, S4, or S5) for that Station Name.



The selected station is tuned in and the Station Name appears on the display.
To select a Frequency, refer to page 15.



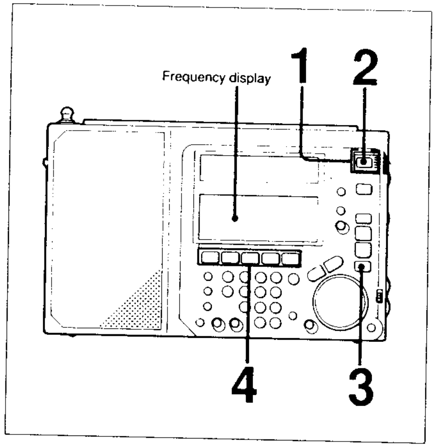
*Note on the Page number

When you memorize Station Names on all the 20 Tuning Pages, all the Page numbers are shown when you press the PAGE FEED buttons. Otherwise, not all the Tuning Pages are displayed.
The Page that has no Station Names is called a "Blank Page." When you select from the Tuning Pages, only the numbers for Pages with preset stations and one "Blank Page" number (with the smallest Page number) is displayed. The other Blank pages will not be displayed.
Only the first "Blank Page" number is displayed so that you can save a new Station Name on that page.

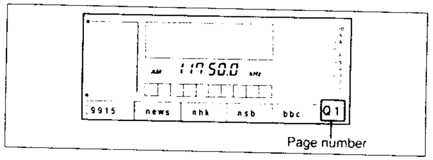
Example: When Pages 1 to 10 are "Blank Pages" and Pages 11 to 20 have Preset Station Names, only Page Numbers 1 and 11 to 20 are displayed when you press the PAGE FEED buttons.

However, during the Program Time Mode when memorizing stations (see page 22), all the 20 Pages are displayed when you press the PAGE FEED buttons.

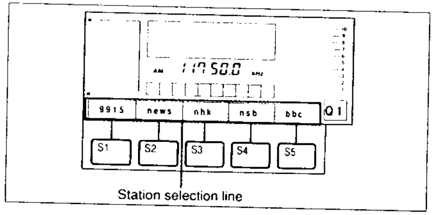
To receive a preset station on a Quick Page



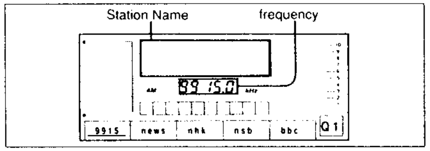
1 Set POWER/LOCK to POWER.
2 Press ON/OFF.
The indications on the frequency display appear.
3 Press QUICK PAGE to select the desired Quick Page, Q1 or Q2.
Each time you press it, the Page number changes as follows:
Q1 → Q2 → Tuning Page



4 Select the the desired station from the 5 Station Names (or frequencies) on the Station selection line, and press the Station Number button (S1, S2, S3, S4, or S5) for that station.

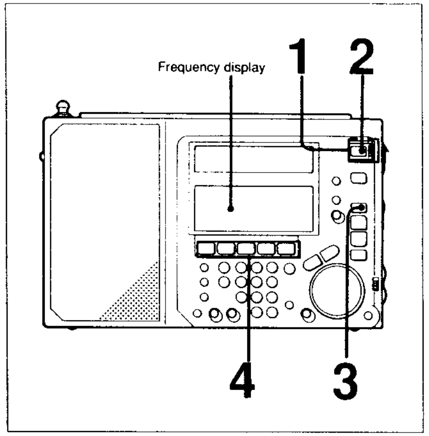


The selected station is tuned in.
The Station Name appears if it has one. (See page 23 for details.)

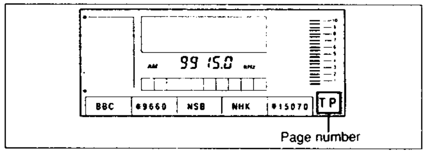


Note
When the unit is shipped from the factory or when you remove the batteries for a long time, the settings for the Quick Page are erased.

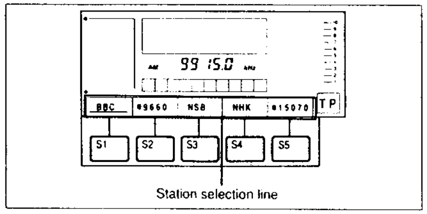
To receive a preset station on the Timer Page



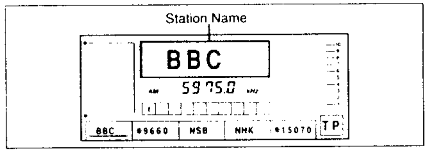
1 Set POWER/LOCK to POWER.
2 Press ON/OFF.
The indications on the frequency display appear.
3 Press TIMER PAGE so that "TP" appears for the Page number.



4 Select the the desired station from the 5 Station Names on the Station selection line, and press the Station Number button (S1, S2, S3, S4, or S5) for that Station Name.



The selected station is tuned in and the Station Name appears on the display.



How to Select a Preset Frequency under a single Station Name

Another important characteristic of the Preset Station Tuning is that you can save up to 10 kinds of "Frequencies" under one Station Name. Each "Frequency" can hold the following types of data:
- band and frequency of the broadcast
- AM detection mode
- Program Time (broadcasting time or any desired time).

Note
The Timer Page can hold only one Frequency.

Memorizing **Program Time** for each Frequency enables the following:
- The "ON AIR" indication (page 16) tells you whether it is the broadcasting time for the station or the program.
- The unit automatically selects the most appropriate station to tune in among the 10 Frequencies.

Saving two or more Frequencies with different Program Times under one Station Name is useful especially for SW reception. The receiving condition of SW broadcast varies depending on the season, time, and frequency. The same programs are broadcasted at the same time using different frequencies so that the listeners can choose the frequency with the best receiving condition. The "best" frequency varies depending on the area and the time.

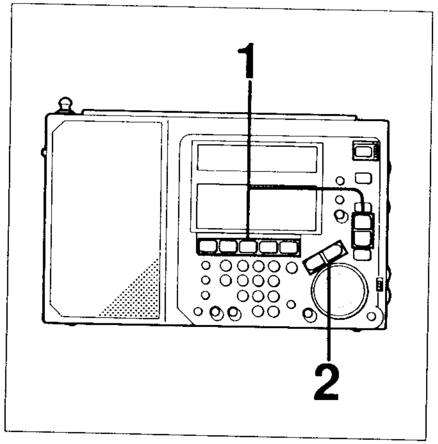
For example, NSB has two frequencies; 3925 kHz, and 6055 kHz. Let's suppose that in a certain area, 3925 kHz is received clearly in the morning, but in the afternoon, 6055 kHz is received better. In this case, you can memorize two "Frequencies" with different Program Times and frequencies in one "Station Name."

You can program each Frequency with starting time and ending time. However, you cannot turn the power of the radio on and off by programming this time duration unless that Station is on the TIMER PAGE and you set the timer (page 27).

Note
When this unit is shipped from the factory, the Timer Page is not preset with Station Names. Refer to page 21 for memorizing stations.

Since you can label the Station Name with any name, you can save 10 different stations of the same category and name them "MUSIC", for example. This way, you can find a station more quickly if you know what type of broadcast you want to listen to.

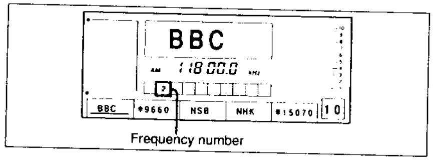
To select a "Frequency"



1 Receive a preset station by selecting a Station Name (see page 12).

If a Station Name holds two or more "Frequencies", all the Frequency numbers appear for one second when you select that Station Name. Then the appropriate "Frequency"* is selected automatically and only one Frequency number remains.

2 If the desired "Frequency" number is not selected, press MEMORY FREQ/METER BAND STEP/CURSOR ⇦ ⇨ to select the desired Frequency.



***How the appropriate Frequency is selected**

The unit automatically selects one Frequency if there are two or more Frequencies in one Station Name.

If the current time is within the Program Time of one Frequency, that Frequency is selected and the "ON AIR" indication appears. If the current time is not within the Program Time of any Frequencies, the Frequency to be selected is one of the following:

- the Frequency whose Program Time is the nearest to the current time (if "Program Time" is memorized in all the Frequencies under that Station Name)
- the Frequency which was selected the last time (if there is a Frequency without Program Time).

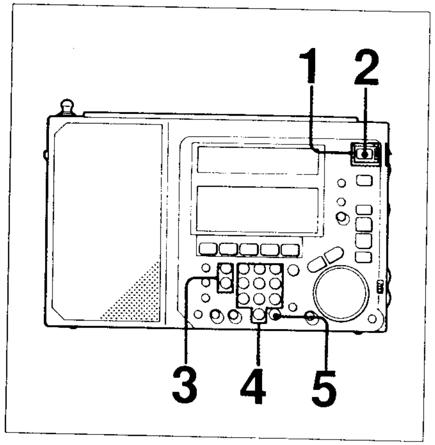
Note

If you want the unit to select the Frequency according to its Program Time, make sure that the clock is set correctly.

Direct Tuning

If you know the frequency of a station to be received, you can tune in the station easily by direct tuning.

How to Tune In a Station Directly



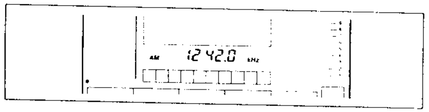
1 Set POWER/LOCK to POWER.
2 Press ON/OFF.
The indications on the frequency display appear.
3 Select the desired band by pressing FM or AM.
For AM (SW, MW, or LW) reception, select the required AM mode (See page 18.)
4 Input the frequency of the desired station by pressing DIRECT TUNE/TIME INPUT numeric buttons.
5 Press EXE.

How to input a frequency

Example 1: AM 1,242 kHz
Press

AM → ① → ② → ④ → ② → EXE

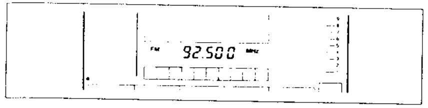
Frequency display



Example 2: FM 92.5 MHz
Press

FM → ⑨ → ② → ⑤ → EXE

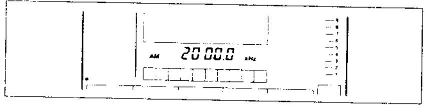
Frequency display



To input a frequency whose right-hand digits are all 0
Example 3: AM 2,000 kHz

AM → ② → EXE

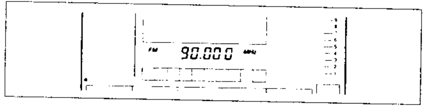
Frequency display



Example 4: FM 90.00 MHz

FM → ⑨ → EXE

Frequency display



In case of 10,000 kHz and 20,000 kHz, however, press "1", "0", "EXE", and "2", "0", "EXE", respectively.
In case of 200 kHz, 300 kHz, ... 900 kHz, press "2", "0", "0", "EXE"; "3", "0", "0", "EXE", etc.

- After pressing a key, press the next key within 10 seconds. If you do not, the previous station returns.
- With direct tuning, the frequency is displayed in increments of the following intervals, depending on the bands:
  AM: 1 kHz
  FM: 0.05 MHz

If you input a frequency between intervals, the frequency at the interval just below is tuned in and displayed. For example, if you input FM 92.540 MHz, FM 92.500 MHz is tuned in and displayed.

If the "TRY AGAIN" indication appears

If you input a frequency outside the frequency range, "TRY AGAIN" appears on the display three times. Then the frequency indication goes back to the previously received frequency.

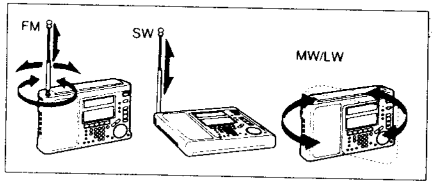
To Improve Receiving Conditions

Adjust the antenna as illustrated.

For FM reception
Pull out the telescopic antenna to expose its swivel base and adjust its length, angle and direction.

For SW reception
Pull out the telescopic antenna to its full length and set it vertically.
Note: If there is a fluorescent lamp just above the radio and the reception is noisy, incline and shorten the telescopic antenna.

For MW/LW reception
Retract the telescopic antenna. The built-in ferrite bar antenna activates. Since this antenna is directional, rotate the unit horizontally for optimum direction.



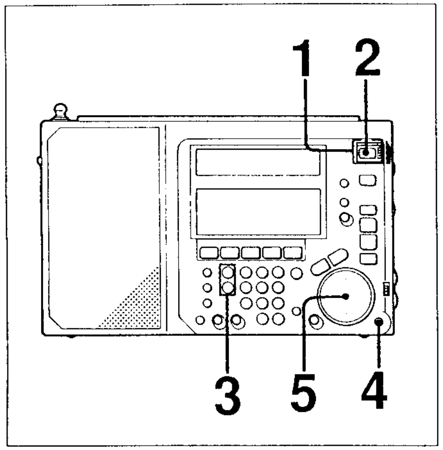
Notes

- If reception is unsatisfactory with the telescopic antenna or the built-in ferrite bar antenna, connect an external antenna. See page 29 for the details.
- In vehicles or buildings, radio reception may be difficult or noisy. Try listening near the window.
- If the received sound is distorted or noisy, adjust the antenna carefully. For AM reception, set the SENS switch to LOCAL.

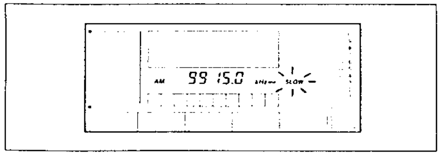
Manual Tuning

Use manual tuning when you do not know the frequency of the station you want to tune in, or when you want to tune in a station more precisely after scan tuning (page 20).

How to Tune In a Station Manually



1 Set POWER/LOCK to POWER.
2 Press ON/OFF.
The indications on the frequency display appear.
3 Select the desired band by pressing FM or AM.
For AM (SW, MW, or LW) reception, select the required AM mode (See the next section.)
4 For AM reception, select the tuning interval (fast or slow) by pressing FAST/SLOW.
Each time you press it, the tuning interval changes alternately.
FAST (no indication): 1 kHz ↔ SLOW: 50 Hz



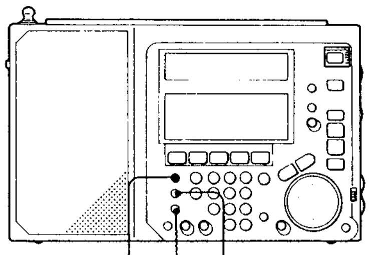
5 Turn the DIAL TUNE/JOG dial to tune in a desired station.
Turn the dial clockwise for higher frequencies and counter-clockwise for lower frequencies.

Note
When you select "SLOW", the tuning interval will be 50 Hz, but the frequency is displayed in 100 Hz step.

Notes:
- When the upper or lower limit of the band frequency (FM or AM) is reached, the frequency no longer changes even if you turn the DIAL TUNE/JOG dial further.
- For AM (LW, MW, and SW) reception in SYNC U,SYNC L, USB, or LSB/CW, be sure to set the tuning interval to SLOW and turn the DIAL TUNE/JOG dial slowly.
- When the DIAL LOCK switch is set to the direction of the arrow, you cannot change the frequency by turning DIAL TUNE/JOG.

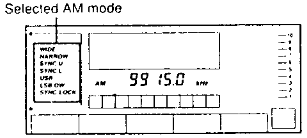
How to Select the AM Mode

Select the appropriate AM mode according to the broadcast receiving conditions.



*For Saudi Arabian model

Press the MODE buttons.
Saudi Arabian model: WIDE/NARROW, SYNC U, and SYNC L.
Models for other countries: WIDE/NARROW, SYNC, and SSB.
The selected AM mode appears on the frequency display.



To change the selectivity

Press WIDE/NARROW and display WIDE or NARROW.
WIDE: Normally set to this mode for wider selectivity.
NARROW: If reception is interrupted or noisy, set to this mode for narrower selectivity. Reception will be improved.

To activate the synchronous detection[1]

Press SYNC and display SYNC U or SYNC L.
Select either SYNC U or SYNC L which best reduces signal interference or distortion due to fading[2].

If neither of the two is effective or if the sound gets worse, press SYNC again to cancel this mode. The SYNC indication disappears.

When you select SYNC U or SYNC L
The SYNC LOCK indication appears on the display. If this indication does not appear, it shows that the synchronous detection cannot be performed because the signal is too weak.

To activate the SSB (Single Side Band) mode

Press SSB and display USB or LSB/CW.
USB: For USB (Upper Side Band) reception.
LSB/CW: For LSB (Lower Side Band) or CW (International Morse Code) reception.

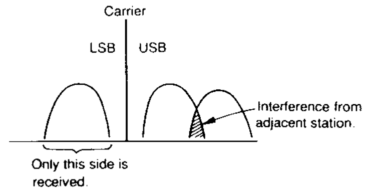
About SSB (Single Side Band) and CW (Continuous Wave)
SSB is very popular among ham and business radio and will be found on all of the amateur bands because of its signal intelligibility. This results from that it transmits signals with half bandwidth of DSB (Double Side Band).
In general, SSB transmissions up to 10 MHz employs LSB modulation, and those above this frequency uses USB.
CW is also popular among ham and business radio. In CW transmission, the amplitude of a carrier is not modulated while that of other system is modulated. CW conveys information by interrupting a carrier using Morse code. It can be heard as a beat sound only with the unit equipped with the BFO circuits. To understand the information transmitted by CW, you need to learn the Morse code.

[1] **Synchronous detection** extracts one side band free from interference out of the DSB signals. The circuit takes the carrier wave out of the signals and provides them with the synthesized signal of exactly the same frequency and phase.

[2] **Fading** is a phenomenon in which the sound gets louder and lower in turn. It occurs because the signal from the station arrives by two or more different paths.

What is synchronous detection?

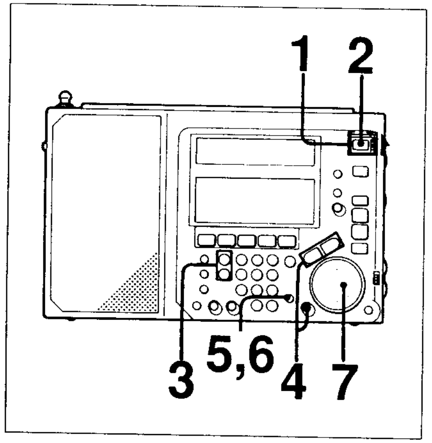
There are two big problems in AM reception: distortion due to fading and interference from adjacent stations. The synchronous detection is effective in solving these problems.
Distortion due to fading is caused by over-modulation, which occurs when a carrier component of the received signal is attenuated on the way. In this receiver, a pure carrier frequency with no level variation, perfectly synchronized with the original carrier, is generated in the synchronous detector circuit and is mixed with the received signal to compensate the attenuated carrier component. In this way, distortion is remarkably reduced.
On the other hand, AM (LW, MW, and SW) broadcasting generally uses double-sideband transmission, in which modulated signals are transmitted using both the upper and lower sidebands (USB and LSB). In most cases, one of the sidebands is affected by interference from adjacent stations (beats). In the synchronous detector circuit, one of USB and LSB can be received. This allows clear reception without interference from adjacent stations.


Carrier
LSB
USB
Interference from adjacent station.
Only this side is received.

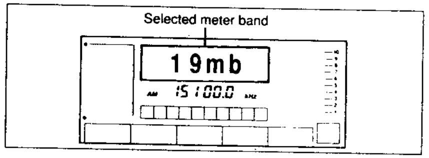
Scan Tuning

Use scan tuning to automatically scan the stations in the frequency range of a broadcast band.

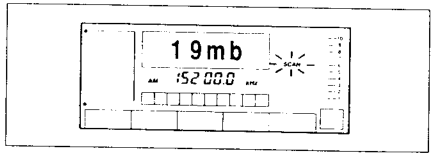
How to Scan the Stations



1 Set POWER/LOCK to POWER.
2 Press ON/OFF.
The indications on the frequency display appear.
3 Select the desired band by pressing FM or AM.
4 While keeping METER BAND depressed, press MEMORY FREQ/METER BAND STEP/CURSOR ⇦ ⇨ and select the meter band. (Refer to the table on the right.)



5 Press SCAN/AUTO TUNE.
"SCAN" indication appears.
Within the frequency range of the selected meter band, scan tuning begins and stops automatically for 2 seconds each time a station is received.



6 Press SCAN/AUTO TUNE again when the desired station is tuned in.
7 Tune in more precisely with the DIAL TUNE/JOG dial if necessary.

The frequency range and tuning interval of each broadcast band

Broadcast band	Meter band (display)	Frequency to be scanned	Scanning intervals
LW	LW	150 – 285 kHz (For Italy and Saudi Arabia) 150 – 528 kHz (For other countries)	3 kHz
MW	MW	531 – 1,602 kHz or 540 – 1,600 kHz[*1]	9 kHz or 10 kHz[*1]
SW1[*2]	120 mb	2,300 – 2495 kHz	5 kHz
SW2[*2]	90 mb	3,200 – 3,400 kHz	5 kHz
SW3	75 mb	3,900 – 4,000 kHz	5 kHz
SW4	60 mb	4,750 – 5,060 kHz	5 kHz
SW5	49 mb	5,950 – 6,200 kHz	5 kHz
SW6	41 mb	7,100 – 7,300 kHz	5 kHz
SW7	31 mb	9,500 – 9,900 kHz	5 kHz
SW8	25 mb	11,650 – 12,050 kHz	5 kHz
SW9	21 mb	13,600 – 13,800 kHz	5 kHz
SW10	19 mb	15,100 – 15,600 kHz	5 kHz
SW11	16 mb	17,550 – 17,900 kHz	5 kHz
SW12	13 mb	21,450 – 21,850 kHz	5 kHz
SW13	11 mb	25,670 – 26,100 kHz	5 kHz
FM	FM	87.5 – 108.0 MHz (For Germany, Italy, Scandinavian countries, Austria and Saudi Arabia) 76.0 – 108 MHz (For other countries)	50 kHz

[*1] 9 kHz or 10 kHz depending on the MW channel step setting (see page 7.)
[*2] Except for Italian models

When scanning stops too often
Set SENS to LOCAL.

Memorizing and Editing Stations

This section describes how to save stations and "edit" (add, erase, or program) them for Preset Station Tuning. Several stations on the Tuning Page are already memorized when this unit was shipped from the factory. To see the difference among Tuning Page, Quick Page, and Timer Page, and for more details, refer to the "Preset Station Tuning" section (page 12.)

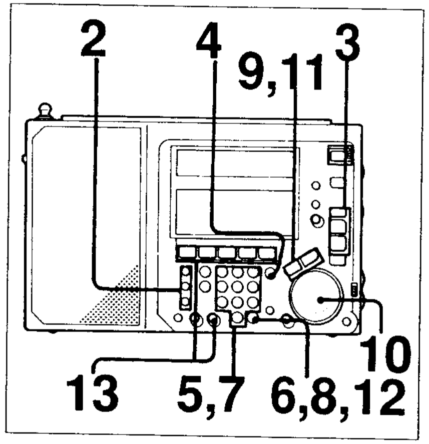
How to Memorize a Station on the Tuning Page and the Timer Page

You can save some or all of the following data under a Preset Station on the Tuning and the Timer Page:
- Station Name
- band and frequency of the broadcast
- AM detection mode
- Program Time (starting time and ending time)

If you do not want to program some kinds of the above data, skip the procedures as indicated in the instructions.

Notes on the Timer Page:
- The preset stations memorized on the Timer Page can be used as the programs for timer operation (see page 27.)
- The Program Time for the Timer Page is up to 120 minutes.

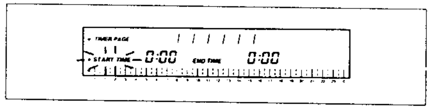
To memorize a Station



1 Tune in the desired station using manual, direct, or scan tuning. (See pages 16, 18, 20.)
2 For AM, select the desired AM mode. (See page 18.)
3 Select the desired Page to be memorized.
For Tuning Pages, press PAGE FEED + ⇧ or – ⇩ and display the desired Page number.
For Timer Page, press TIMER PAGE and display "TP."

If you do not want to program the Program Time nor the Station Name, go to step 13.

4 Press EDIT.
"START TIME" on the clock/timer display flashes. (The system enters the Program Time Mode.)

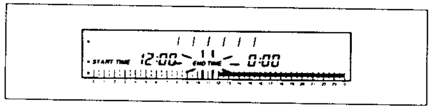


If you do not want to program the Program Time, go to step 9.

5 Input the starting time* by pressing the DIRECT TUNE/TIME INPUT numeric buttons.

Example: To input "12:00".
Press "1," "2", "0", "0".

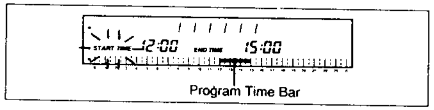
6 Press EXE.
"END TIME" flashes.



7 Input the ending time* by pressing the DIRECT TUNE/TIME INPUT numeric buttons.

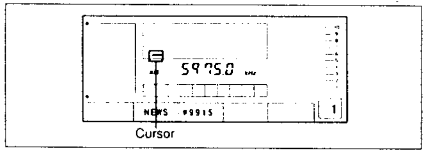
Example: To input "15:00"
Press "1", "5", "0", "0".

8 Press EXE.
"START TIME" flashes again.
The Program Time duration is indicated by the Program Time Bar.



If you do not want to program the Station Name, go to step 13.

9 Press MEMORY FREQ/METER BAND STEP/CURSOR ⇦ or ⇨ button.
A cursor appears under one letter of the Station Name on the frequency display. (The unit enters the Station Name Editing Mode.)



Cursor

10 Turn the DIAL TUNE/JOG dial to select the desired character for the first letter of the Station Name.
11 Press MEMORY FREQ/METER BAND STEP/CURSOR ⇨ button.
The cursor moves to the next letter.

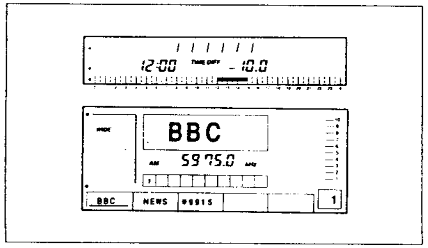
Repeat steps 10 and 11 to make the desired Station Name.

12 Press EXE.
13 While keeping ENTER depressed, press the desired station number; S1, S2, S3, S4, or S5.

The memorized Station Name appears above the memorized station number on the Station Selection Line on the Frequency display.

(The unit goes back to the Tuning Mode.)

Example
The display will look like the illustration below if you have programmed the following data:
frequency: AM, 5975.0 kHz
starting time: 12:00
ending time: 15:00
AM mode: Wide
Station Name: BBC
Page and number: Tuning Page 1, Station number S1



About the starting time and ending time
- Input either the local time or the UTC time depending on the clock indication If the UTC indication is displayed, input the UTC time, and if not, input the local time. Once the Program Time is memorized, if you change the clock indication by pressing LOCAL/UTC, the Program Time indication and Program Time bar changes also according to the time difference.
- You do not have to input a "0" for time such as "0:10". Just input "1" and "0".

About the Program Time Mode, the Station Name Editing Mode, and the Tuning Mode
This unit has three modes: Program Time Mode, Station Name Editing Mode, and Tuning Mode.
In the Program Time Mode, you can input the starting and ending time.
In the Station Name Editing Mode, you can make a Station Name.
The Tuning Mode is the normal state in which you can tune in a station.
When you press ENTER and S1-S5 and memorize a Station or a Frequency, the unit goes back to the Tuning Mode.

To exit the Program Time Mode or Station Name Editing Mode and go back to the Tuning Mode, press FM, AM, or S1-S5.
To exit the Station Name Editing Mode and go back to the Program Time Mode, press EXE.

How to make a Station Name

You can use up to 6 characters to make a Station Name. The letters and symbols you can use are the following (53 kinds of characters and a blank space):

	A	B	C	D	E	F	G	H	I	J	K	L	M
?	@	:	;	=	_	%	&	'	(	)	*	+	,

N	O	P	Q	R	S	T	U	V	W	X	Y	Z
-	.	/	0	1	2	3	4	5	6	7	8	9

As you turn the DIAL TUNE/JOG dial clockwise, the letter changes in the above order. If you turn it counterclockwise, it changes in the opposite order. Turn the dial until the desired letter appears on the display.

Note: Make sure that the DIAL LOCK switch is not locked.

To delete a letter, press PAGE FEED – ⇧.
To insert a space, press PAGE FEED + ⇩.

If you memorize a station that does not have a Station Name onto a blank station, a Station Name is given automatically. The symbol "*" and the frequency number appear on the Station Name Area and on the Station Selection Line.
Example:
FM 98.0 MHz is memorized as "*98.0".
AM 15360 kHz is memorized as "*15360".

Notes on Tuning Pages:
- If the station has a new Station Name, you cannot memorize it on a station number that already has a Preset Station Name. You can memorize it only on a blank station.
- If the station does not have a new Station Name, you can either memorize it on a blank station or add it to an already memorized Preset Station Name. (See page 25 for details.)
- You cannot overwrite a station on the Tuning Page except for the following cases. If you want to erase a station, see page 24.

- You can overwrite a new station onto a previously memorized station if:
— The previously saved station does not have a Program Time, but the new station with the same Station Name and frequency number has a Program Time.
— The previously saved station has a Program Time, but the new station with the same Station Name and frequency does not have a Program Time.
- You can eliminate the Program Time from that station by inputting the same time for both the starting time and ending time also.
- When you press the ENTER button in step 13, the underlines on the Station Name line of the Turning Page flash to let you know which station numbers can be memorized on.

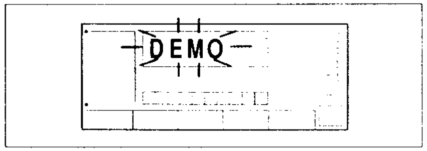
Notes on Timer Page:
- If you memorize a station on the number where a station has already been memorized, the previous station is be erased and replaced by the new one.
- If you memorize a station without Station Name on a previously memorized station, the Station Name does not change but the programmed data is replaced by the new data.
- Each station on the Timer Page can have only one Frequency.

Demonstration mode

This unit has a demonstration mode in which all the preset stations in the Tuning Pages are tuned in for 3 seconds each sequentially.

Press FREE while keeping METER BAND depressed.

"DEMO START" is displayed and the demonstration mode starts from the first Page.

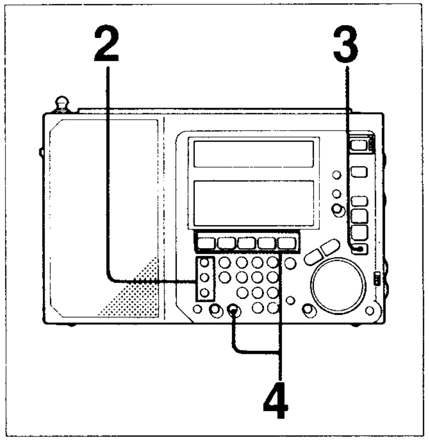


About the key words
You can memorize the following "key words" for the demonstration mode
"GOTOnn" which means "go to Page nn."
"RETURN" which means "return to Page 1."
Input these key words as the Station Names for the Preset Station using the same procedure as for making the Station Names on page 21.
These Station Names work as key words only in the demonstration mode

To Memorize a Station on the Quick Page

You can memorize one of the following two data in a Preset Station on the Quick Page:
- Station Name (of the Station on the Tuning Page)
- band and frequency of the broadcast and AM detection mode

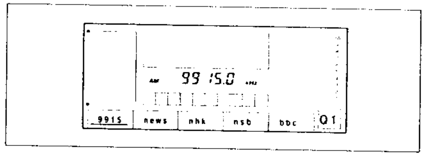
To memorize a station



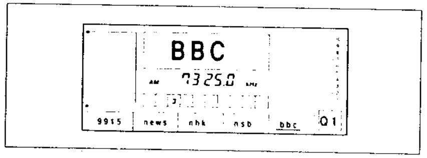
1 Tune in the desired station by manual, direct, scan or Preset Station tuning.
2 For AM, select the AM mode. (See page 18.)
3 Select Q1 or Q2 by pressing QUICK PAGE.
4 While keeping ENTER depressed, press the desired station number; S1, S2, S3, S4, or S5.

The memorized Station Name or frequency appears on the Station Selection Line. The Station Name will be displayed in small letters.
If you tune in a station using manual, direct, or scan tuning, the frequency appears on the Station Selection Line, and the Station Name Area remains blank.

Example 1
If you memorize a station using manual, direct or scan tuning:



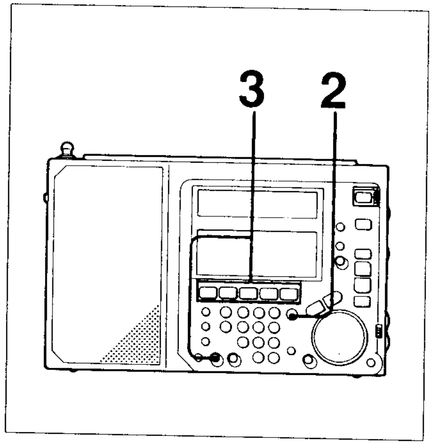
Example 2
If you memorize a station using Preset Station Tuning:



Note
If you memorize a station on the Station number, the previous station is erased and replaced by the new one.

How to Erase a Frequency or a Station

You can erase a Station on the Tuning Page and Timer Page by following the procedures below. For the Tuning Page, you can erase a Frequency.



1 Tune in the Preset Station to be erased. Select the Frequency also if necessary. (See pages 12, 14, 16)
2 Press EDIT.
3 While keeping TIMER CHECK/ERASE depressed, press the Station number to be erased: S1, S2, S3, S4, or S5.

The Frequency that you tuned in in step 1 is erased.
If the Station Name has only one Frequency, that station becomes a "Blank" station.
If the Station Name has more than two Frequencies, only the tuned Frequency is erased and the rest remains. The Station Name remains also.

If you want to erase all the Frequencies in the Station Name
Repeat step 3.
When all the Frequencies are erased, the Station Name disappears.

If there is a Preset Station with the same Station Name
After the Preset Station is erased, other Station with the same name is tuned in so that it can be erased if you want to.

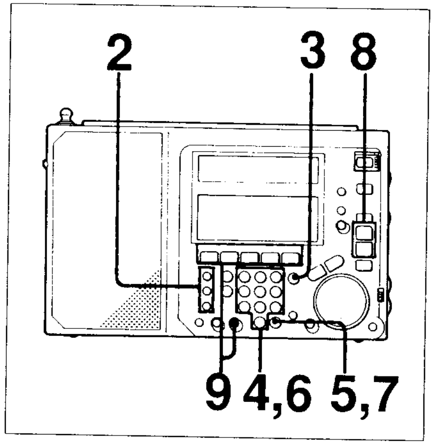
About the beep sound
A beep sound is heard when you press TIMER CHECK/ERASE to warn you that the Station or Frequency will be erased.

How to Add a Frequency

You can memorize up to 10 Frequencies under each Station Name on the Tuning Page. The Frequencies can hold some or all of the following data:
- band and frequency of the broadcast
- AM detection mode
- Program Time (starting time and ending time)

The Station Name will be the same one as the previously memorized station.

You can save up to 162 Frequencies in total on the Tuning Pages.



1 Tune in the desired station.
2 For AM, select the desired AM mode.

If you do not want to program the Program Time, go to step 8.

3 Press EDIT.
"START TIME" flashes.

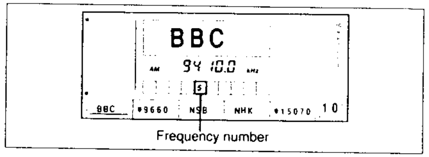
4 Input the starting time by pressing DIRECT TUNE/TIME INPUT numeric buttons. (See page 21.)
5 Press EXE.
"END TIME" flashes.
6 Input the ending time by pressing DIRECT TUNE/TIME INPUT numeric buttons. (See page 21.)
7 Press EXE.
"START TIME" flashes again.

The Program Time duration is indicated by the Program Time Bar on the clock/timer display.

8 Select the Page that has the Station Name to be added to by pressing PAGE FEED + ↑ or – ↓.

9 While keeping ENTER depressed, press the desired station number; S1, S2, S3, S4, or S5.

The station is added as a new Frequency and will have a Frequency number for it. (The new Frequency will be added next to the Frequency number which was tuned in last time under that Station.)

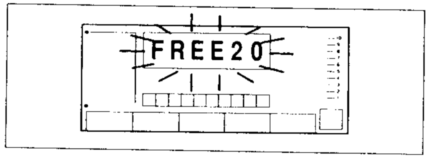


Frequency number

Note:
If you make a new Station Name, you cannot add it as a Frequency; it is memorized as a new Station.

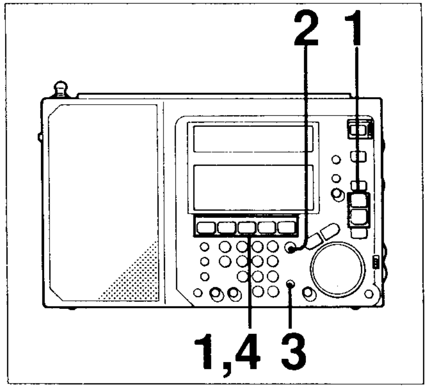
To see how many more Frequencies can be memorized

Press FREE.
"FREE" and the number of Frequencies that you can save is displayed on the Station Name Area.
Example:
When you can save 20 more Frequencies, "FREE 20" appears on the display.



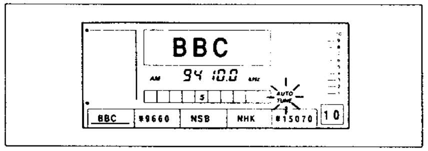
Press FREE again to go back to Station Name display.

To tune in all the Frequencies under the Station Name — Auto tune



1 Tune in the desired Preset Station.
2 Press EDIT.
3 Press SCAN/AUTO TUNE to display AUTO TUNE.
The Auto Tune mode is memorized.
4 Press the station number (S1, S2, S3, S4, or S5) for that Station Name on that station.

The Auto Tune function is activated. "AUTO TUNE" displays and all the Frequencies are tuned in sequentially for a second. Then, the Frequency with the strongest signal strength is tuned in.



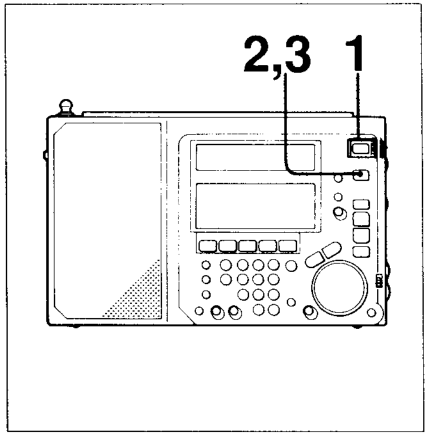
Once the Auto Tune mode is memorized, the Auto Tune function activates each time you select that Station Name by Preset Station Tuning (Tuning Page or Quick Page).

To cancel the Auto Tune mode
Follow the same procedure as above. When you press SCAN/AUTO TUNE again in step 3, the AUTO TUNE indication disappears.

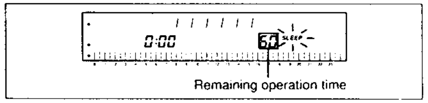
Note
You can memorize and cancel the Auto Tune mode only on Station Names on the Tuning Page. However, once you memorize the Auto Tune mode on a Station, the Auto Tune function works also when you tune in the same Station Name on a Quick Page.

Sleep Timer Operation

You can make the radio turn off automatically after 15, 30, or 60 minutes by the sleep timer.



1 Set POWER/LOCK to POWER.
2 Press SLEEP.
The power turns on.
3 Select the sleep timer time by pressing SLEEP.
Each time you press it, the display changes to "60", "30", and "15". When you press it again, the power turns off.



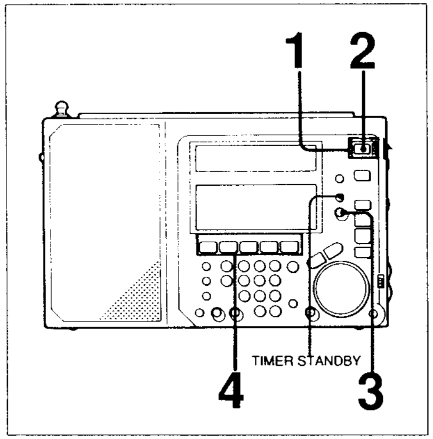
4 Tune in the desired station.

The remaining operation time is displayed as the time elapses.
The radio will be turned off automatically at the preset time.

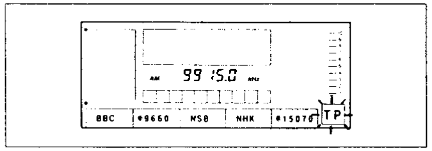
How to Set the Timer

You can set up to 5 different programs for timer operation. The programs are those saved on the Timer Page. (See page 12.) Timer operation can be activated either when the power is turned off or when you are listening to another station.

Before setting the timer, make sure that the desired stations and Program Time have been saved on the Timer Page. If not, see page 21 and memorize them.

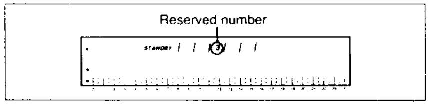


1 Set POWER/LOCK to POWER.
2 Press ON/OFF.
3 Press and hold RESERVE and display "TP" to select Timer Page.



4 While keeping RESERVE depressed, press the desired Station number (S1, S2, S3, S4, or S5).

STANDBY and the reserved number appears on the clock/timer display.

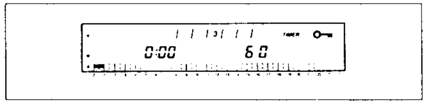


5 Repeat step 4 if you want to set the other four timers.
6 Turn off the power by pressing ON/OFF or tune in another station.

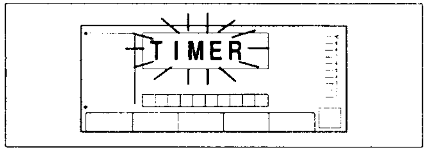
Note: The timer does not operate if you set POWER/LOCK to LOCK.

When starting time comes, the radio turns on and tunes in the programmed station. If you are listening to another station, the station changes automatically to the programmed station. The remaining time until the ending time is displayed as the time elapses.
When the ending time comes, the radio will be turned off automatically or tunes in the station that you were listening to before the timer was activated.

While the timer is activated, the TIMER and O‑‑ (key protect) indication appears on the clock/timer display. All the buttons are locked. To release the key protect, press KEY PROTECT O‑‑.



About the error message
When you press any button while TIMER O‑‑ is displayed, "TIMER" appears on the Station Name Area three times to let you know that timer operation is activated.



To cancel the timer

Press TIMER STANDBY.
The reservation for all the timer programs is canceled.
When you press TIMER STANDBY again, all the timer programs are set again. (Only while POWER/LOCK is set to POWER.)

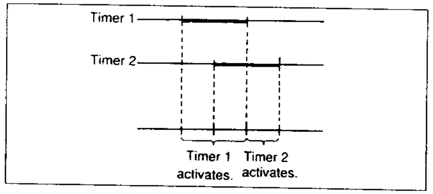
To cancel the reservation of each timer program

While keeping RESERVE depressed, press the desired Station number. Only the pressed number disappears from the display.

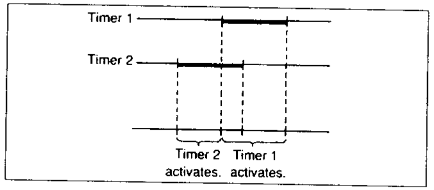
About the priority of the timer programs

When two or more timer programs overlap, priority is given in the order from Timer 1 to Timer 5.
For example, Timer 1 has priority over Timer 2.
Example 1 shows that Timer 2 cannot start to activate until the ending time for Timer 1.
Example 2 shows that Timer 1 starts to activate even during Timer 2.
In Example 3, Timer 2 is switched to Timer 1 once and is switched back to Timer 2 again after the ending time for Timer 1.

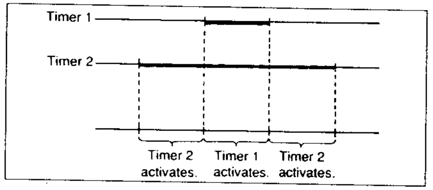
Example 1:


Timer 1
Timer 2
Timer 1 activates.
Timer 2 activates.

Example 2:


Timer 1
Timer 2
Timer 2 activates.
Timer 1 activates.

Example 3:


Timer 1
Timer 2
Timer 2 activates.
Timer 1 activates.
Timer 2 activates.

To use the sleep timer after setting the timer programs

Press SLEEP and tune in the desired station after setting the timer. The radio turns off by the sleep timer when you go to sleep, and turns on with another program by the timer when you wake up.

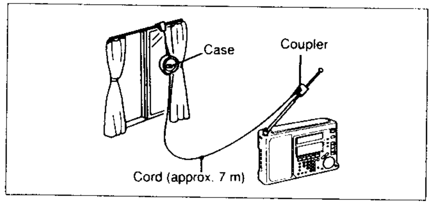
Note
The timer has priority over the sleep timer. Therefore, if the starting time of the timer comes during the sleep timer operation, the programmed station of the timer is tuned in.

To check the Program Time of the timer programs
While keeping TIMER CHECK ERASE depressed, press the Station number (S1, S2, S3, S4, or S5) for the station to be checked. The Station Name and its frequency appears in the frequency display and the "START TIME" and "END TIME" for that timer program appears in the clock/timer display.

External Antenna Connection

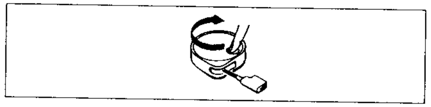
How to Use the Supplied SW Compact Antenna — For Better SW Reception

Usually the telescopic antenna is sufficient for SW reception. However, in a metal or concrete building, the use of the supplied SW compact antenna (AN-71) is recommended.


Case
Coupler
Cord (approx. 7 m)

1 Fully pull out the cord from the case.
2 Attach the coupler to the telescopic antenna.
3 (When the window can be opened): Extend the cord and the case out through the window, after making sure there is no danger.
(When the window cannot be opened): Fully extend the cord along the frame of the window.

After using

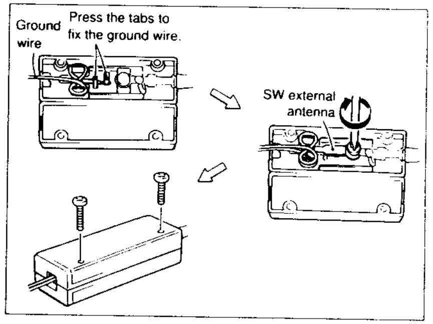


How to Use an External Antenna (Not Supplied)

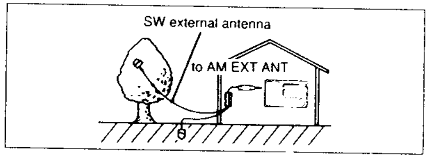
For SW reception

Usually, the telescopic antenna is sufficient for SW reception. However, in a building or for more stable SW reception, use an SW external antenna (not supplied) with the supplied antenna connector. You can also use the wide range antenna AN-1 or AN-102 (not supplied, see page 30 for details).

Connection
1 Connect the ground wire (if necessary) and the spade lug of the SW external antenna to the terminals on the supplied antenna connector, close the lid and tighten the screws.


Ground wire
Press the tabs to fix the ground wire.
SW external antenna

2 Connect the antenna connector to the AM EXT ANT jack of the unit.


SW external antenna
to AM EXT ANT

When reception is noisy, connect one end of a ground wire to the antenna connector as illustrated and the other end directly to a convenient earth ground.

For LW/MW/SW Reception

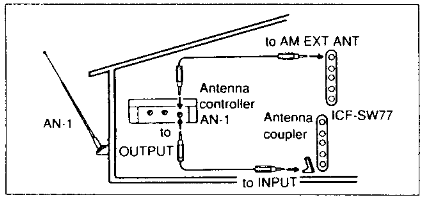
Use the wide range antenna AN-1 or AN-102 (not supplied). There are two methods.

Method A
With a connecting cord, connect the OUTPUT jack of the antenna controller (supplied with the AN-1 or AN-102) and the AM EXT ANT jack of the ICF-SW77.

Method B (For LW/MW reception only)

1 With a connecting cord, connect the OUTPUT jack of the antenna controller and the INPUT jack of the antenna coupler (supplied with the AN-1 or AN-102).
2 Put the antenna coupler near the ICF-SW77.

Example: When the AN-1 is used.


to AM EXT ANT
Antenna controller AN-1
AN-1
to OUTPUT
Antenna coupler
ICF-SW77
to INPUT

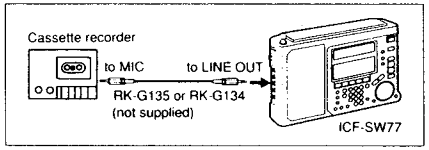
Notes

- When receiving MW or LW broadcasts without and external antenna, be sure to disconnect a SW external antenna. Otherwise, you cannot receive them as the built-in ferrite bar antenna does not function.
- Never connect a ground wire to a gas pipe. Doing so could cause a fire.
- If there is lightning, do not touch the wire of an external antenna and disconnect its AC power adaptor (if connected) immediately. Never touch the antenna wire during a lightning storm.
- When using an external antenna, retract the telescopic antenna.
- Locate the outdoor antenna as far away from the street as possible.
- For details about the external antenna, refer to its instruction manual.

Recording a Broadcast

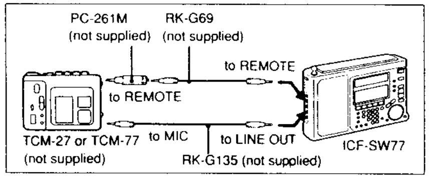
You can record radio programs by connecting a tape recorder to the LINE OUT jack as illustrated below. Use the RK-G135 connecting cord (not supplied) for monaural recording, or RK-G134 (not supplied) for FM stereo recording.

Tune in the desired station and start recording on the tape recorder.
The volume control setting on the radio has no effect on the recording.
Note: For FM stereo recordings you must connect the earphones to the PHONES jack. Otherwise, the sound cannot be recorded in stereo.


Cassette recorder
to MIC
to LINE OUT
RK-G135 or RK-G134
(not supplied)
ICF-SW77

To start recording at the desired time

You can start recording at the desired time by connecting the Sony TCM-27 or TCM-77 cassette-corder (not supplied) to the LINE OUT and REMOTE jacks as illustrated below. Use an RK-G69 and an RK-G135 connecting cords (not supplied) and a PC-261M plug adaptor (not supplied).


PC-261M
(not supplied)
RK-G69
(not supplied)
to REMOTE
to REMOTE
TCM-27 or TCM-77
(not supplied)
to MIC
to LINE OUT
RK-G135 (not supplied)
ICF-SW77

1 Tune in the desired station.
2 Set the Timer (page 27).
3 Set the standby function of the cassette recorder.
For details, see the operating instructions of the cassette-corder.

Note on recording with the timer
You cannot start recording at a desired time if you use the cassette-corder not equipped with the timer standby switch.

SECTION 3

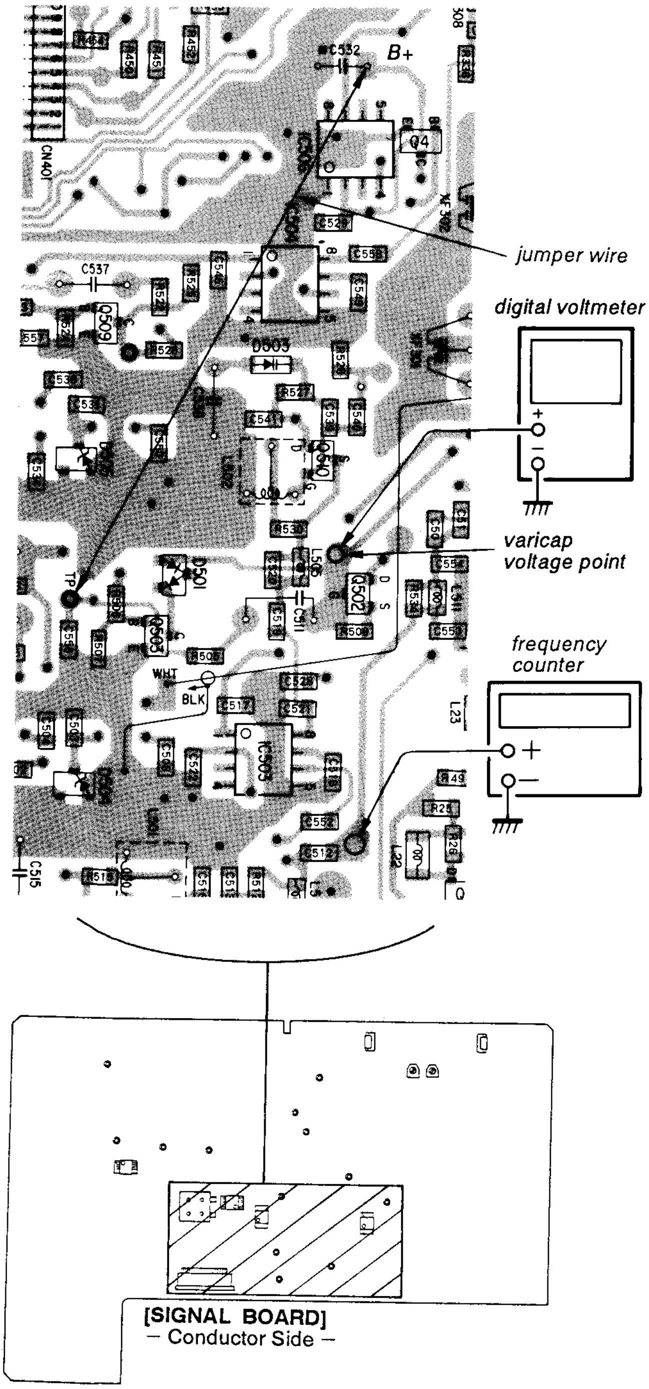
ELECTRICAL ADJUSTMENTS

See page 25 for the adjustment location.

Main VCO Frequency Adjustment

Setup:

Band Selector: AM
Frequency: 29,999 kHz
MODE Selector: Arbitrary
Connect a jumper wire as following figure.


C532
B+
Q4
IC506
IC504
C537
Q509
D503
jumper wire
digital voltmeter
+
−
varicap voltage point
L506
D501
Q502
Q503
TP
WHT
BLK
IC503
frequency counter
+
−
C515
CN401
[SIGNAL BOARD]
– Conductor Side –

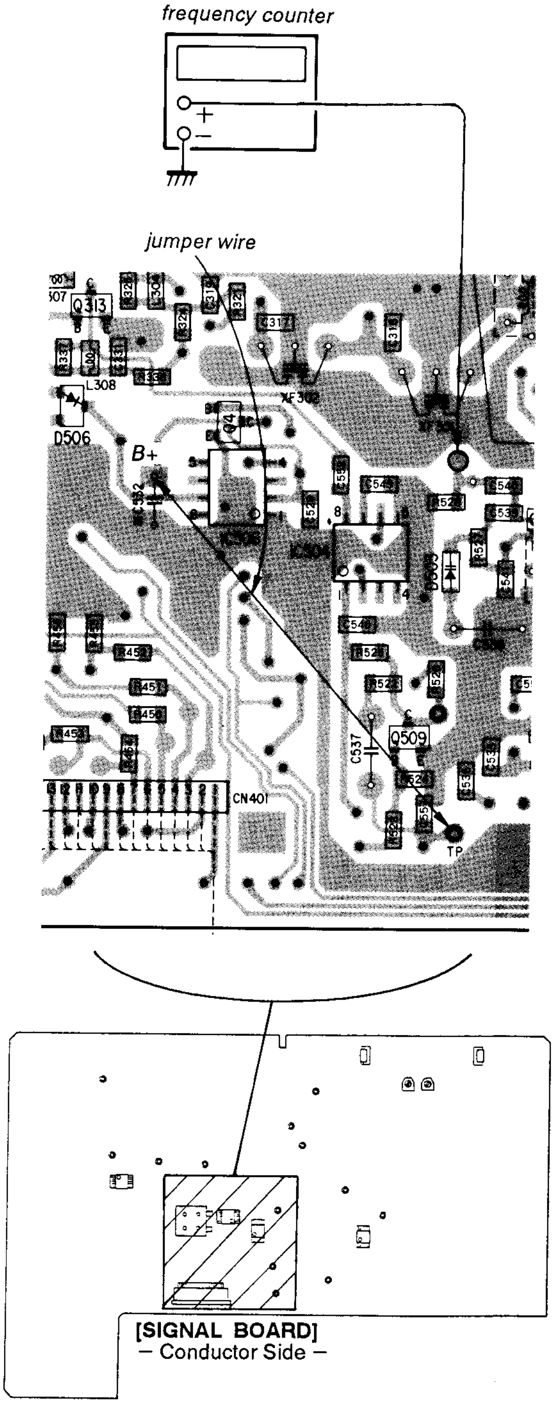
Procedure:

1. Adjust CT502 for a 54.5 MHz ± 100 kHz reading.
2. Unsolder the jumper wire at B+ land side.
   Connect this end to ground land.
   Confirm the counter reading should be less than 93 MHz.
3. After the adjustment, remove the jumper wire.
4. Confirm the digital voltmeter reading should be less than 11.3 V.

Sub VCO Freerun Frequency Adjustment

Setup:

Band selector: AM
Connect jumper wire as following figure.


frequency counter
+
−
jumper wire
Q313
L308
XF302
D506
B+
C532
Q4
IC306
IC304
Q509
C537
CN401
TP
[SIGNAL BOARD]
– Conductor Side –

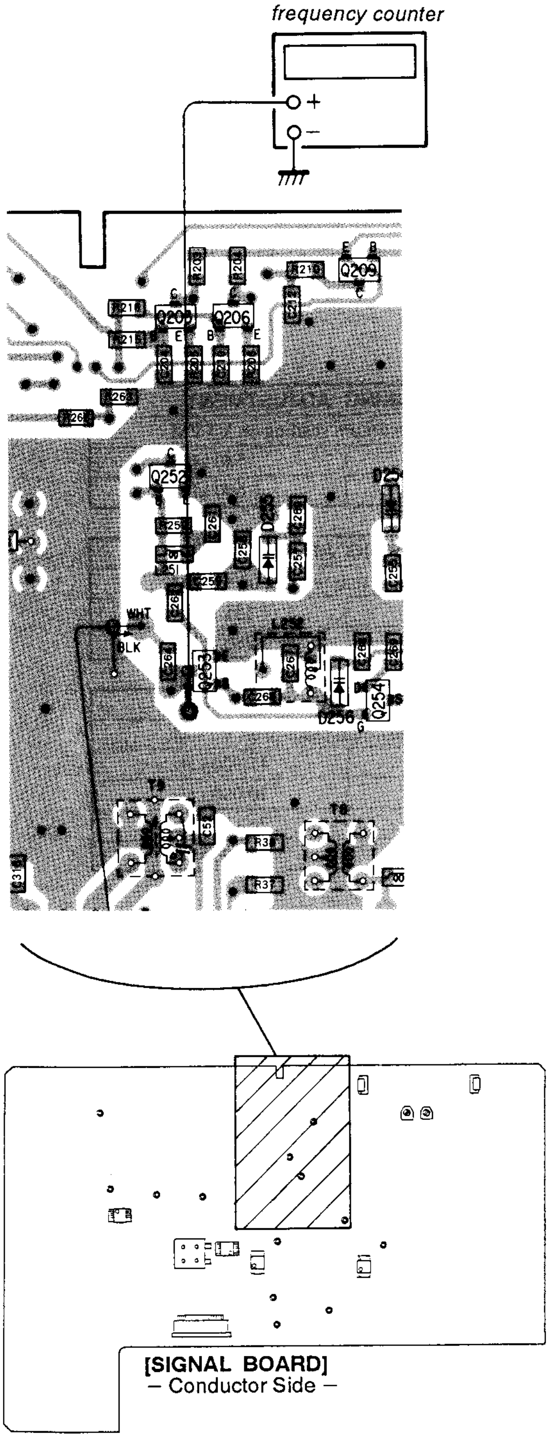
Procedure:

1. Adjust CT503 for a 53.5 MHz ± 100 kHz reading.
2. Unsolder the jumper wire at B+ land side. Connect this end to ground land. Confirm the counter reading should be less than 49 MHz.
3. After the adjustment, remove the jumper wire.

X501 (6.275 MHz) X'tal Adjustment

Setup:

Band Selector:	FM
Frequency:	89.300 MHz

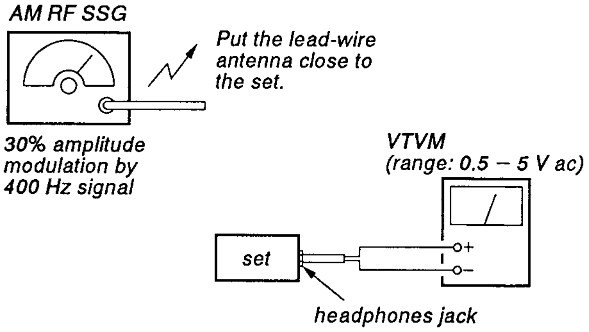

frequency counter
+
−
Q209
Q205
Q206
Q252
Q253
Q254
WHT
BLK
T9
T8
[SIGNAL BOARD]
– Conductor Side –

Procedure:
Adjust CT501 for a 100 MHz ± 100 Hz reading.

AM 1st IF Adjustment

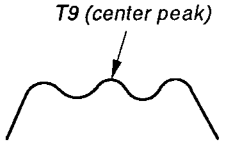
Setup:

Band Selector:	AM
MODE Selector:	WIDE
Frequency:	150 kHz for Display
VOLUME control:	Arbitrary


AM RF SSG
Put the lead-wire antenna close to the set.
30% amplitude modulation by 400 Hz signal
VTVM
(range: 0.5 – 5 V ac)
set
+
−
headphones jack

Procedure:

1. Tune in the set to the AM RF SSG frequency.
2. Adjust T9 for a maximum output level.
3. Adjust L302 and L303 alternately for a maximum and symmetrical output level.
4. Final response should be as illustrated below.


T9 (center peak)

This response can be checked by detuning the set to upper and lower sides of the center frequency in same amount, or by changing SSG frequency with set's frequency unchanged.

5. Repeat above steps several times until no further improvement is obtained.

AM 455kHz IF Adjustment

Setup:

Band Selector:	AM
MODE Selector:	WIDE
VOLUME control:	Arbitrary

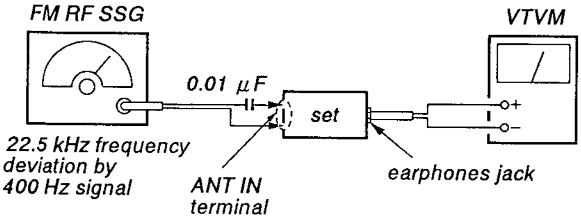
Procedure:

1. Tune in the set to a known, stable and strong AM station.
2. Adjust T301 for a maximum output level.

FM IF Adjustment

Setup:

Band Selector: FM
Frequency: clear spot
VOLUME control: Arbitrary


FM RF SSG
VTVM
0.01 μF
set
22.5 kHz frequency deviation by 400 Hz signal
ANT IN terminal
earphones jack

Procedure:

1. Adjust T253 to obtain a maximum signal output with VTVM.

SYNC USB/LSB ZERO-BEAT Adjustment

Setup:

Band Selector: AM
MODE Selector: SSB (USB or LSB/CW)

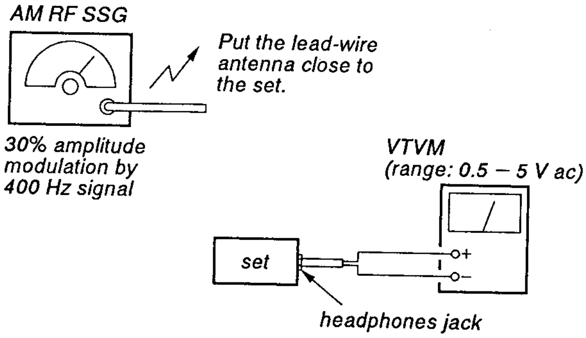
Procedure:

1. Tune in the set to a known, stable and strong AM station.
2. Adjust L301 for a zero-beat note.
3. Chage the MODE selector to the opposite side band (ex. first USB, next LSB/CW), and confirm it continues to hold a zero-beat note. When it doesn't, adjust again.

AM Tracking Adjustment

Setup:

Band Selector: AM


AM RF SSG
Put the lead-wire antenna close to the set.
30% amplitude modulation by 400 Hz signal
VTVM
(range: 0.5 – 5 V ac)
set
headphones jack

MW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
ANT2-2	540 kHz
CT201	1,600 kHz

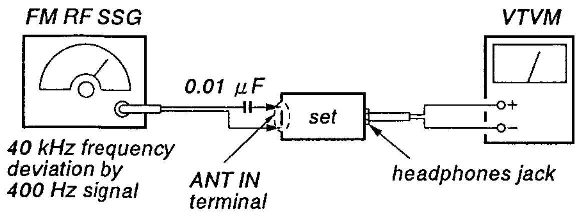
LW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
ANT2-4	155 kHz
CT202	280 kHz

SW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
CT2	17,900 kHz
T4	10,000 kHz
CT1	26,100 kHz
T5	18,000 kHz

FM Tracking Adjustment

Set up:

Band Selector: FM
Frequency: 87.5 MHz or 108.000 MHz
VOLUME control: Arbirary


FM RF SSG
VTVM
0.01 μF
set
+
−
40 kHz frequency deviation by 400 Hz signal
ANT IN terminal
headphones jack

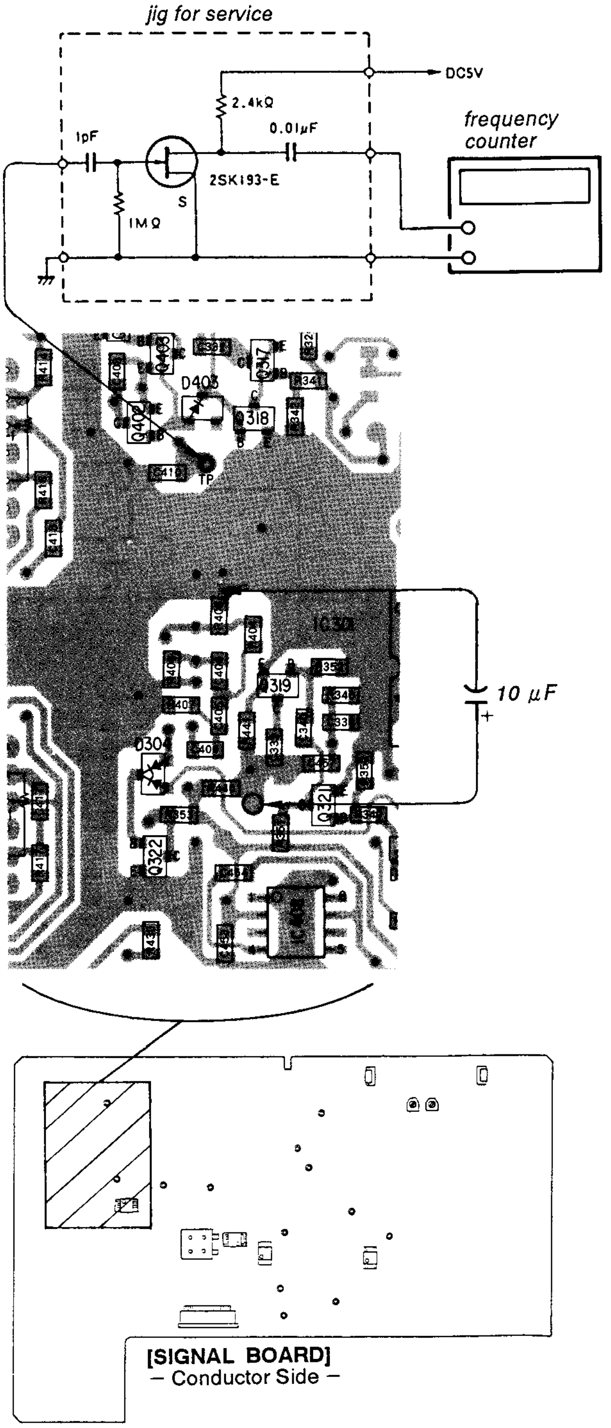
Procedure:

1. RF SSG's and Set's Frequency: 87.5 MHz
   Adjust T251 and T252 for a maximum output level.
2. RF SSG's and Set's Frequency: 108.000 MHz
   Adjust CT251, CT252, and CT253 for a maximum output level.
3. Repeat above steps several times ending with trimmers until no further inprovement is obtained.

FM Stereo Adjustment

Setup:

Band Selector: FM
VOLUME control: Arbitrary


jig for service
DC5V
2.4kΩ
0.01µF
1pF
2SK193-E
S
1MΩ
frequency counter
10 μF
+
TP
D403
Q318
Q319
IC301
D304
Q322

[SIGNAL BOARD]
– Conductor Side –

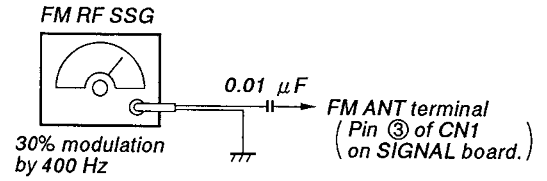
Procedure:

1. Insert the headphones to headphones jack.
2. Connect 10 μF capacitor as above figure.
3. Tune the set to 98 MHz.
4. Adjust RV401 for 75.9 – 76.1 kHz reading on the frequency counter.

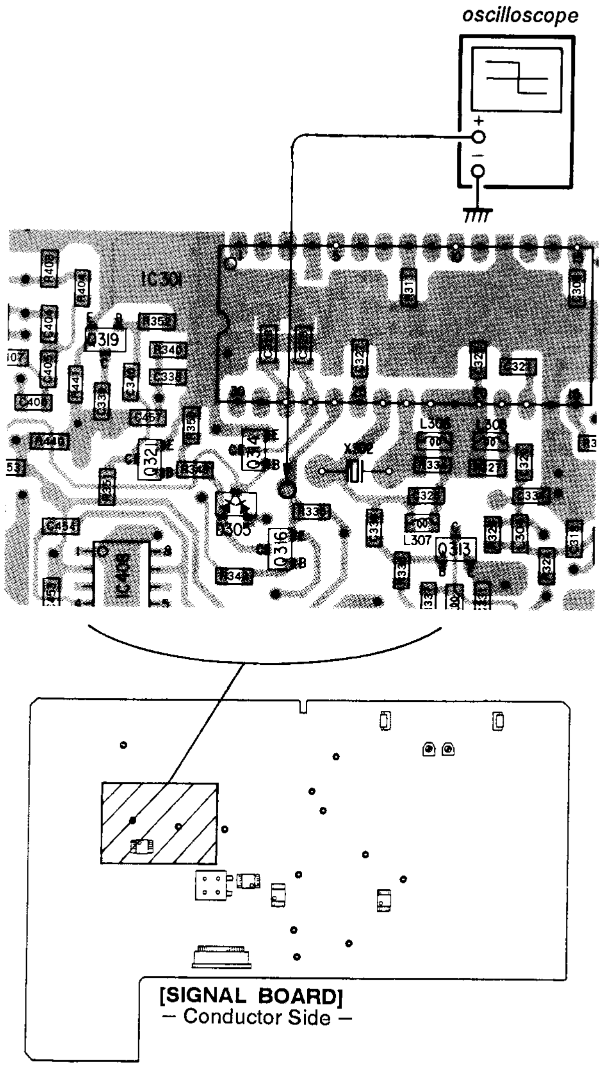
FM Scan Stop Adjustment

Setup:

Band Selector: FM
VOLUME Control: Arbitrary


FM RF SSG
0.01 µF
FM ANT terminal
(Pin ③ of CN1 on SIGNAL board.)
30% modulation by 400 Hz

Frequency Deviation: ±22.5 kHz
Carrier Frequency: 93.025 MHz
Output Level: 0.5mV (54 dB)


oscilloscope
+
–
IC301
Q319
Q321
X302
L307
Q313
Q316
IC408
[SIGNAL BOARD]
– Conductor Side –

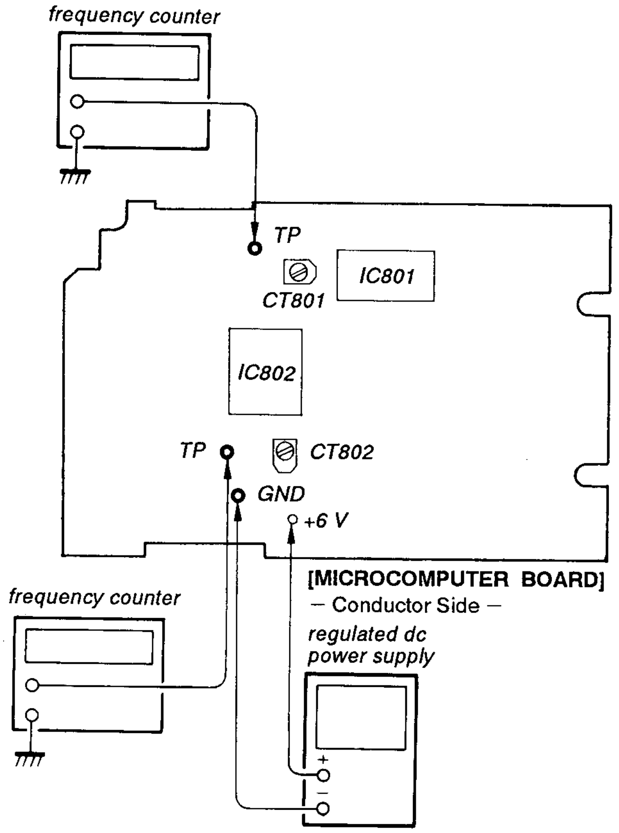
Procedure:

1. Tune the set to 93 MHz.
2. Adjust RV301 for 1.5 V down point on the oscilloscope.

Clock Frequency Adjustment (Microcomputer board)

Note: When X802 or X803 is replaced, it is necessary to adjust the clock frequency of IC related to the replaced crystal.

Setup:


frequency counter
TP
CT801
IC801
IC802
TP
CT802
GND
+6 V
[MICROCOMPUTER BOARD]
– Conductor Side –
frequency counter
regulated dc power supply
+
–

- **IC801 Clock Frequency Adjustment**

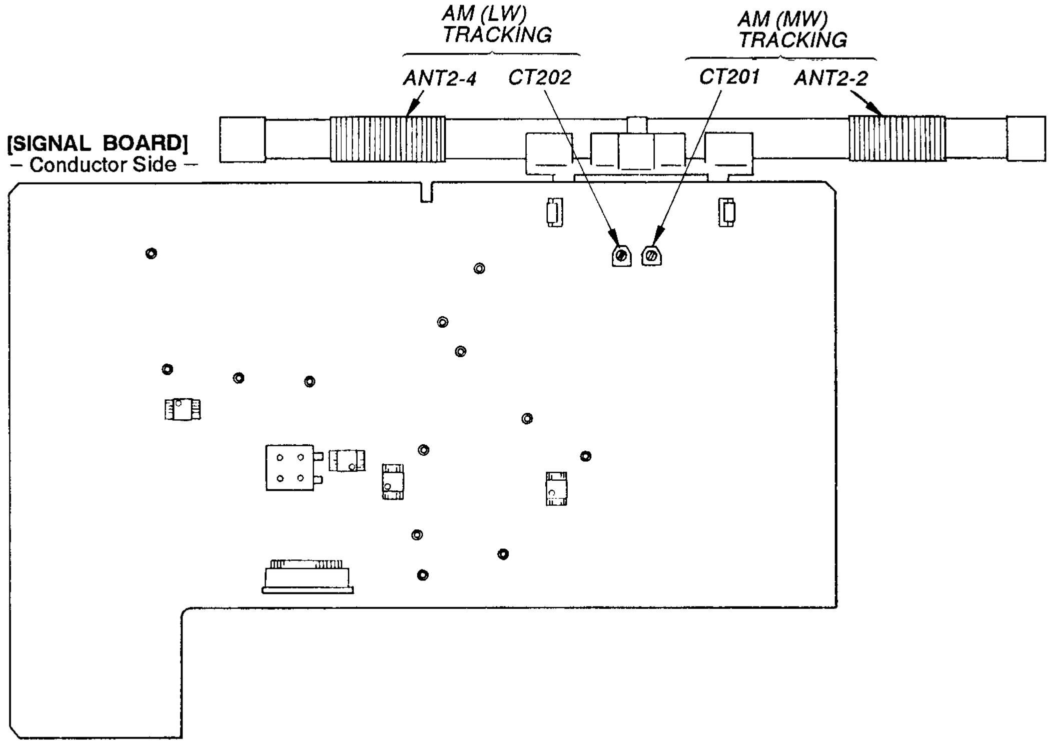
1. Connect the regulated dc power supply to the microcomputer board.
2. Press and keep on pressing S801 (TIME SET key).
   (Activates 2 MHz clock.)
3. Adjust CT801 for 2,008.0 ±0.2 kHz reading on the frequency counter.

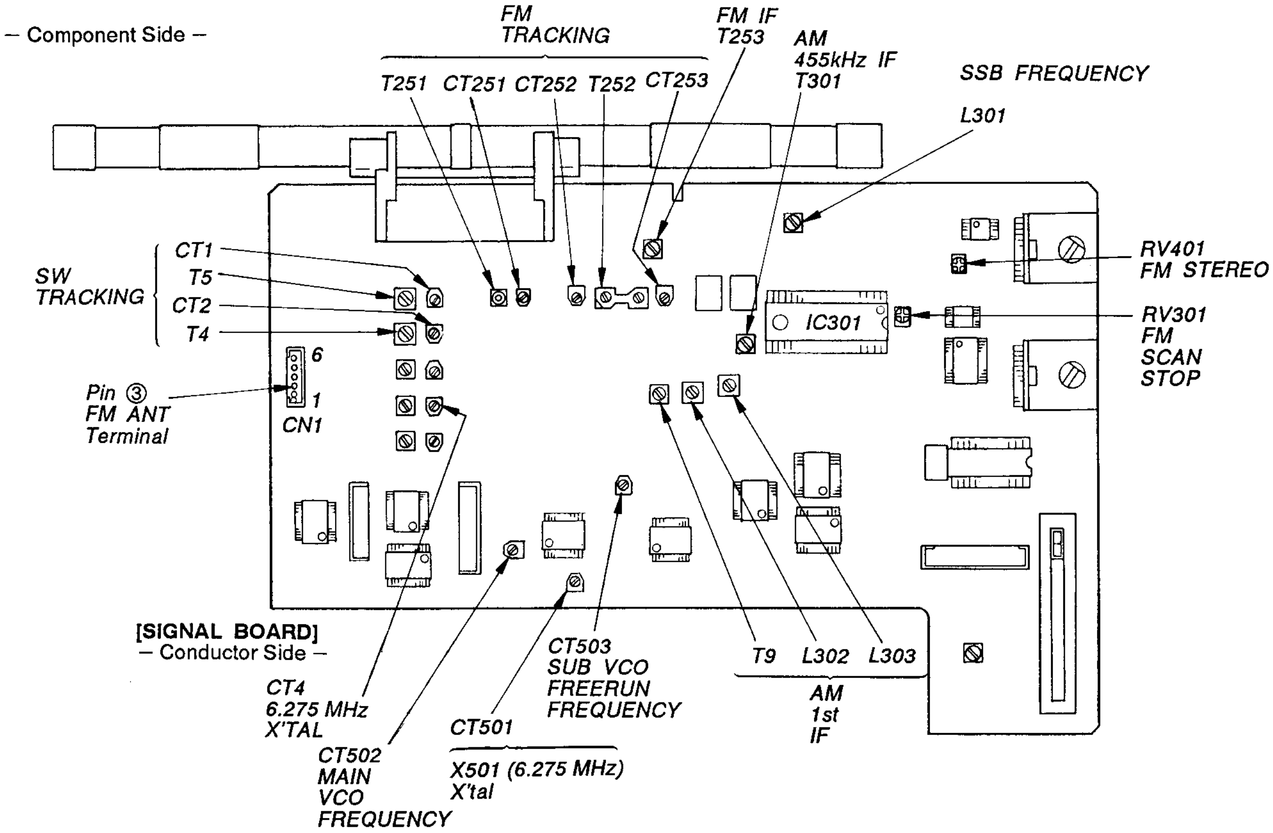
Note: When S801 is released, 2 MHz clock will stop about 1 second later.

- **IC802 Clock Frequency Adjustment**

1. Connect the regulated dc power supply to the microcomputer board.
2. Turn radio on by pressing S806 (ON/OFF key).
3. Adjust CT802 for 2,008.0 ±0.2 kHz reading on the frequency counter.

Adjustment Location


AM (LW)
TRACKING
ANT2-4
CT202
AM (MW)
TRACKING
CT201
ANT2-2
[SIGNAL BOARD]
– Conductor Side –


– Component Side –
FM
TRACKING
T251
CT251
CT252
T252
CT253
FM IF
T253
AM
455kHz IF
T301
SSB FREQUENCY
L301
SW
TRACKING
CT1
T5
CT2
T4
RV401
FM STEREO
IC301
RV301
FM
SCAN
STOP
6
Pin ③
FM ANT
Terminal
1
CN1
[SIGNAL BOARD]
– Conductor Side –
CT4
6.275 MHz
X'TAL
CT502
MAIN
VCO
FREQUENCY
CT503
SUB VCO
FREERUN
FREQUENCY
CT501
X501 (6.275 MHz)
X'tal
T9
L302
L303
AM
1st
IF

SECTION 4
DIAGRAMS

4-1. IC PIN FUNCTION
IC801 (MAIN MICRO COMPUTER)
M50933

Pin No.	Port Name	I/O	Signal Name	Description
1	S8	O	SEG8	SEGMENT SIGNAL OUTPUT TO LCD801
2	S7	O	SEG7	SEGMENT SIGNAL OUTPUT TO LCD801
3	S6	O	SEG6	SEGMENT SIGNAL OUTPUT TO LCD801
4	S5	O	SEG5	SEGMENT SIGNAL OUTPUT TO LCD801
5	S4	O	SEG4	SEGMENT SIGNAL OUTPUT TO LCD801
6	S3	O	SEG3	SEGMENT SIGNAL OUTPUT TO LCD801
7	S2	O	SEG2	SEGMENT SIGNAL OUTPUT TO LCD801
8	S1	O	SEG1	SEGMENT SIGNAL OUTPUT TO LCD801
9	S0	O	SEG0	SEGMENT SIGNAL OUTPUT TO LCD801
10	COM3	O	COM3	COMMON SIGNAL OUTPUT TO LCD801
11	COM2	O	COM2	COMMON SIGNAL OUTPUT TO LCD801
12	COM1	O	COM1	COMMON SIGNAL OUTPUT TO LCD801
13	COM0	O	COM0	COMMON SIGNAL OUTPUT TO LCD801
14	VL1	I		BIAS VOLTAGE FOR LCD801
15	VL2	I		BIAS VOLTAGE FOR LCD801
16	VL3	I		BIAS VOLTAGE FOR LCD801
17	VCC	–		POWER SUPPLY INPUT
18	CNTR	I		PULSE CONUNTER FOR ROTARY ENCODER INPUT
19	$\overline{\text{SRDY}}$	I		SERIAL COMMUNICATION READY SIGNAL INPUT
20	SCK	O		SERIAL COMMUNICATION CLOCK OUTPUT
21	SO	O		SERIAL COMMUNICATION DATA OUTPUT
22	SI	I		SERIAL COMMUNICATION DATA INPUT
23	SSTART	O		SERIAL START SIGNAL OUTPUT. COMMUNICATED WITH IC802
24	$\overline{\text{SREQ}}$	I		SERIAL COMMUNICATION REQUEST FROM IC802
25	XCI	I		CONNECTED TO CRYSTAL OSCILLATOR (X801)
26	XCO	O		CONNECTED TO CRYSTAL OSCILLATOR (X801)
27	$\overline{\text{INT1}}$	I		PULSE COUNTER FOR ROTARY ENCODER INPUT
28	VSS	I		CONNECTED TO GROUND
29	$\overline{\text{RESET}}$	I		RESET SIGNAL INPUT
30	XI	I		CONNECTED TO CRYSTAL OSCILLATOR (X802)
31	XO	O		CONNECTED TO CRYSTAL OSCILLATOR (X802)
32	VSS	–		CONNECTED TO GROUND
33	P27	I	(P27)	KEY INPUT REQUEST FOR $\overline{\text{KR7}}$ AND $\overline{\text{KR8}}$
34	P26	I	$\overline{\text{KR6}}$	KEY RETURN SIGNAL INPUT
35	P25	I	$\overline{\text{KR5}}$	KEY RETURN SIGNAL INPUT
36	P24	I	$\overline{\text{KR4}}$	KEY RETURN SIGNAL INPUT
37	P23	I	$\overline{\text{KR3}}$	KEY RETURN SIGNAL INPUT
38	P22	I	$\overline{\text{KR2}}$	KEY RETURN SIGNAL INPUT
39	P21	I	$\overline{\text{KR1}}$	KEY RETURN SIGNAL INPUT
40	P20	I	$\overline{\text{KR0}}$	KEY RETURN SIGNAL INPUT

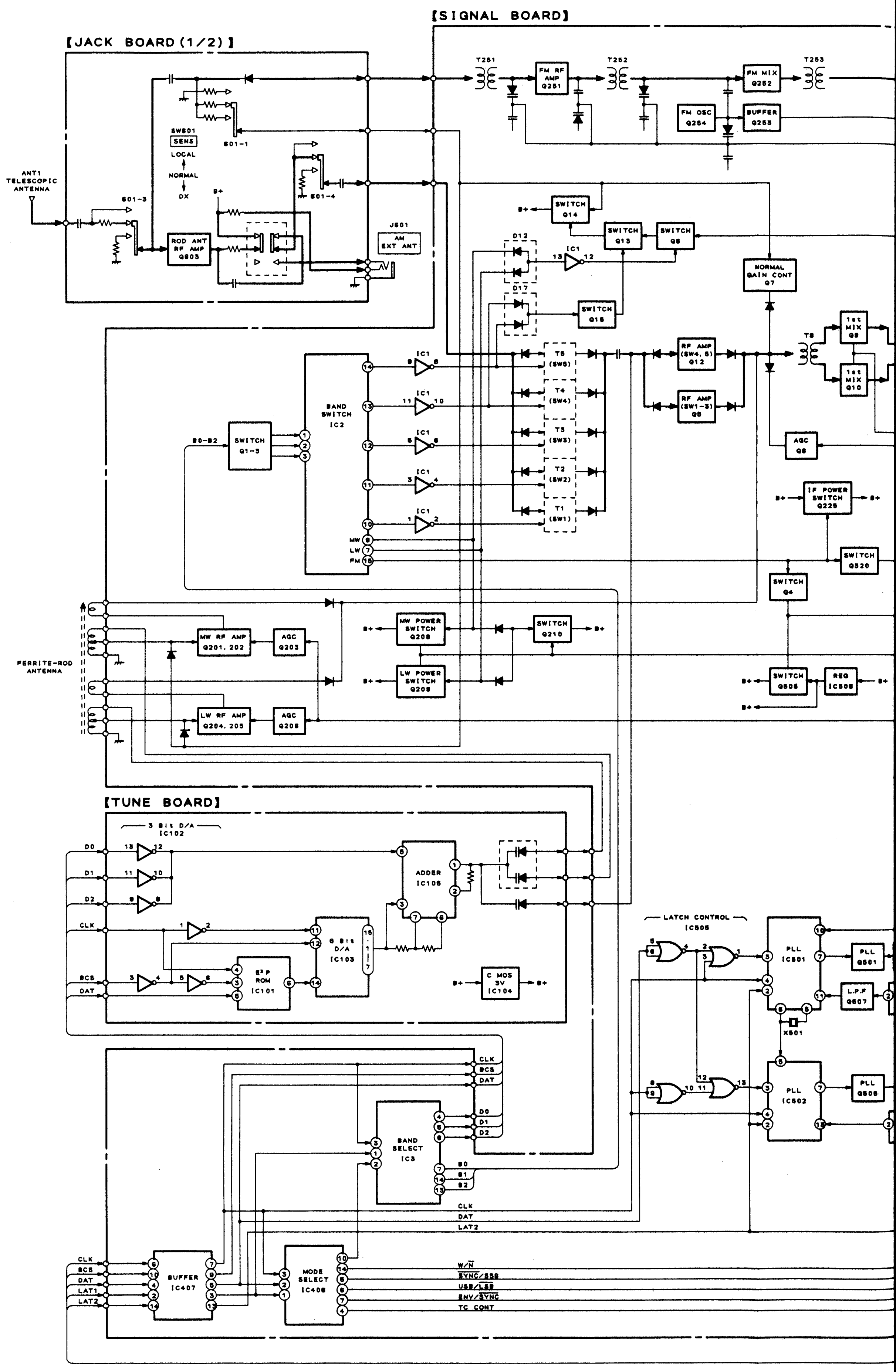
Pin No.	Port Name	I/O	Signal Name	Description
41	P17	I	$\overline{\text{KR8}}$	KEY RETURN SIGNAL INPUT
42	P16	I	$\overline{\text{KR7}}$	KEY RETURN SIGNAL INPUT
43	P15	O	$\overline{\text{KS5}}$	KEY SCAN OUTPUT
44	P14	O	$\overline{\text{KS4}}$	KEY SCAN OUTPUT
45	P13	O	$\overline{\text{KS3}}$	KEY SCAN OUTPUT
46	P12	O	$\overline{\text{KS2}}$	KEY SCAN OUTPUT
47	P11	O	$\overline{\text{KS1}}$	KEY SCAN OUTPUT
48	P10	O	$\overline{\text{KS0}}$	KEY SCAN OUTPUT
49	P07	I	OFF LOCK	KEY LOCK DETECT INPUT
50	P06	I	RE LOCK	ROTARY ENCODER LOCK DETECT INPUT
51	P05	I	$\overline{\text{EMPTY}}$	BATTRY EMPTY SIGNAL INPUT
52	P04	I	EXCHG	BATTRY CHANGE SIGNAL INPUT
53	P03	O	NC	NOT CONNECTED
54	P02	O	PRE	POWER SUPPLY CONTROL SIGNAL FOR IC802
55	P01	O	LIGHT	LED DRIVE OUTPUT
56	P00	O	RESET	RESET SIGNAL OUTPUT TO IC802
57	S31	O		SEGMENT SIGNAL OUTPUT TO LCD801
58	S30	O		SEGMENT SIGNAL OUTPUT TO LCD801
59	S29	O		SEGMENT SIGNAL OUTPUT TO LCD801
60	S28	O		SEGMENT SIGNAL OUTPUT TO LCD801
61	S27	O		SEGMENT SIGNAL OUTPUT TO LCD801
62	S26	O		SEGMENT SIGNAL OUTPUT TO LCD801
63	S25	O		SEGMENT SIGNAL OUTPUT TO LCD801
64	S24	O		SEGMENT SIGNAL OUTPUT TO LCD801
65	S23	O		SEGMENT SIGNAL OUTPUT TO LCD801
66	S22	O		SEGMENT SIGNAL OUTPUT TO LCD801
67	S21	O		SEGMENT SIGNAL OUTPUT TO LCD801
68	S20	O		SEGMENT SIGNAL OUTPUT TO LCD801
69	S19	O		SEGMENT SIGNAL OUTPUT TO LCD801
70	S18	O		SEGMENT SIGNAL OUTPUT TO LCD801
71	S17	O		SEGMENT SIGNAL OUTPUT TO LCD801
72	S16	O		SEGMENT SIGNAL OUTPUT TO LCD801
73	VSS	–		CONNECTED TO GROUND
74	S15	O		SEGMENT SIGNAL OUTPUT TO LCD801
75	S14	O		SEGMENT SIGNAL OUTPUT TO LCD801
76	S13	O		SEGMENT SIGNAL OUTPUT TO LCD801
77	S12	O		SEGMENT SIGNAL OUTPUT TO LCD801
78	S11	O		SEGMENT SIGNAL OUTPUT TO LCD801
79	S10	O		SEGMENT SIGNAL OUTPUT TO LCD801
80	S9	O		SEGMENT SIGNAL OUTPUT TO LCD801

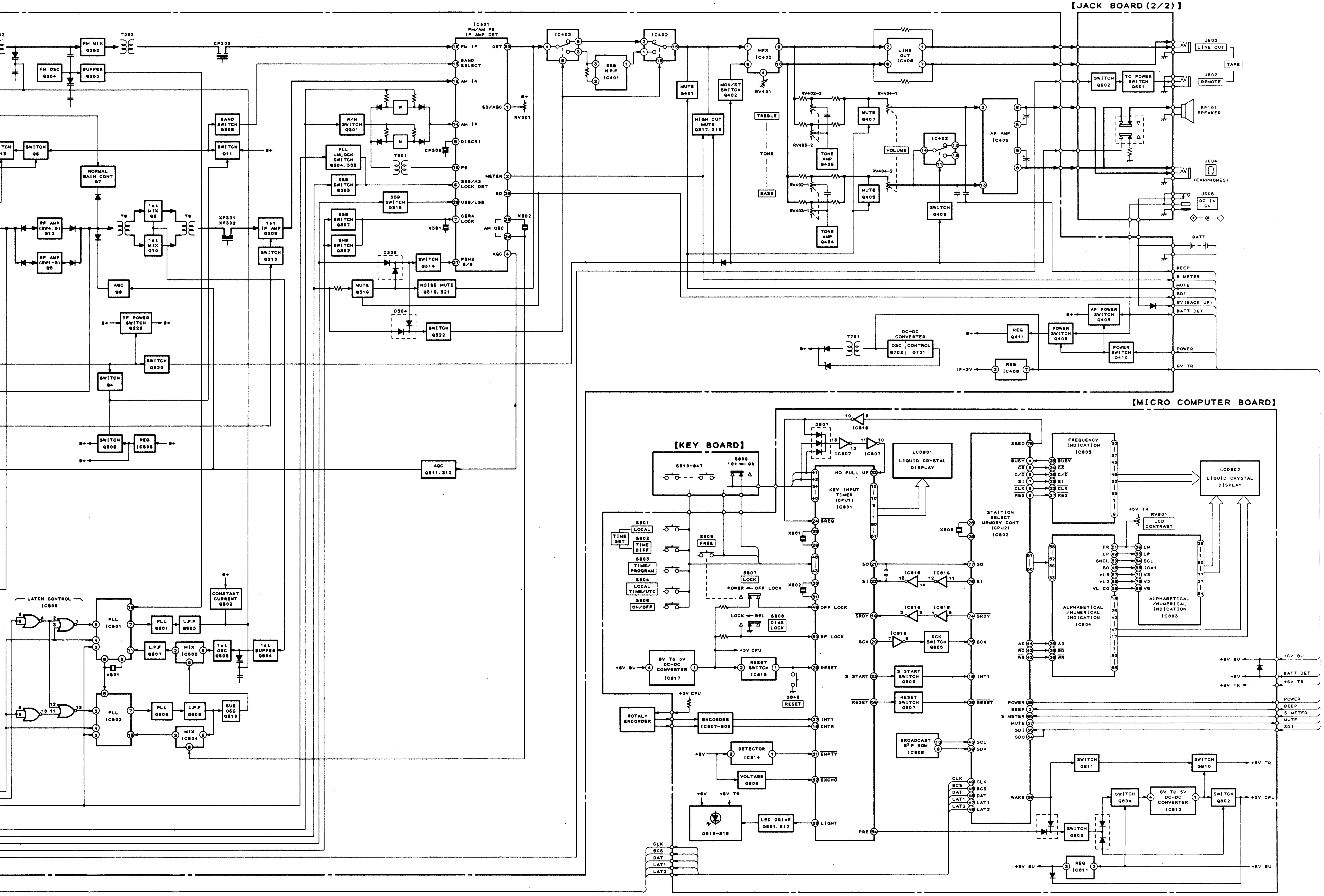
IC802(SUB MICRO COMPUTER)
M37450M8

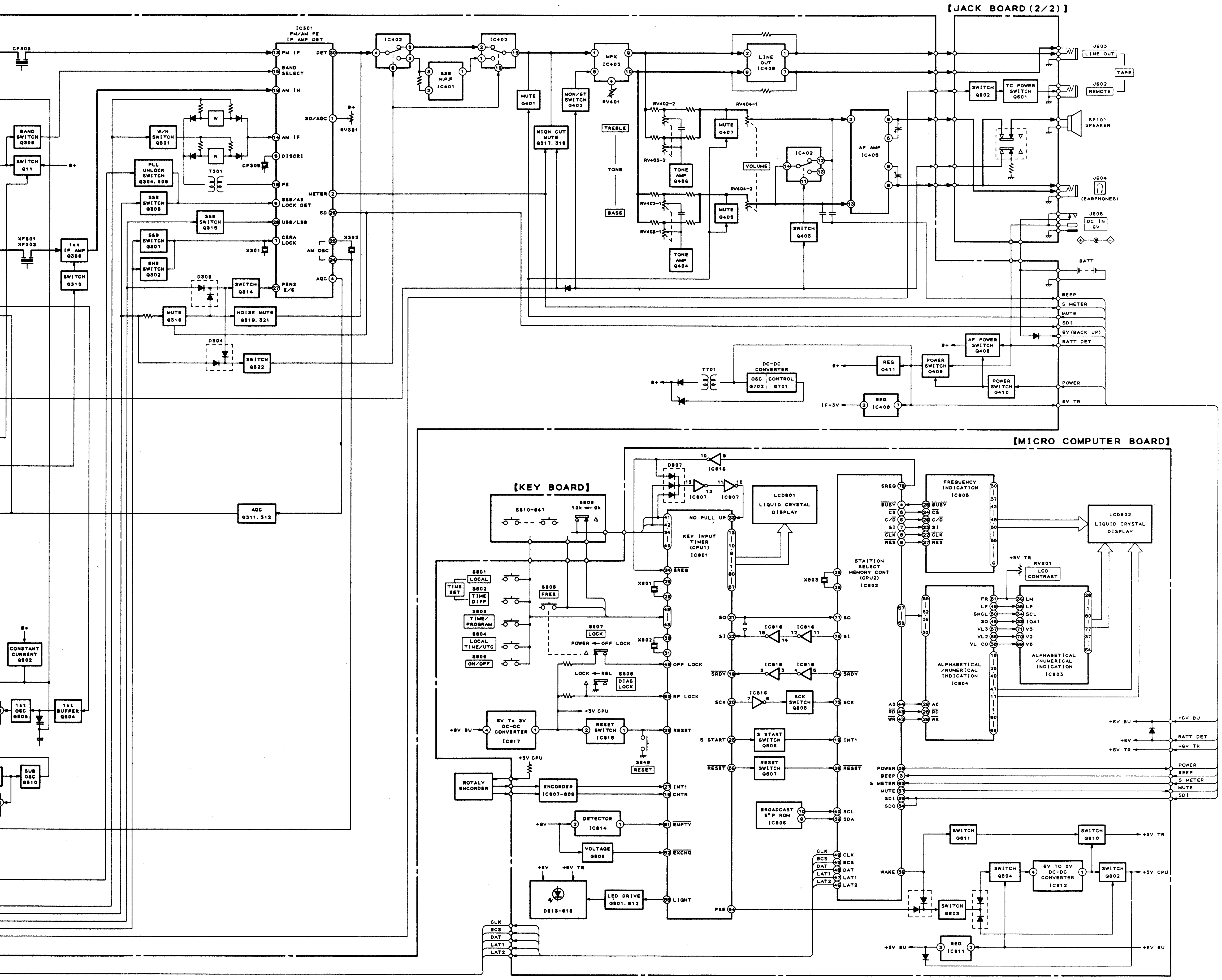
Pin No.	Port Name	I/O	Signal Name	Description
1	NC	–	NC	NOT CONNECTED
2	P31	O	NC	NOT CONNECTED
3	EV1	O	BEEP	BEEP SIGNAL OUTPUT
4	P57	I	$\overline{BUSY}$	LCD802-1 CONTROL DRIVER IC805 ACTIVATING SIGNAL INPUT
5	P56	O	$\overline{CS}$	SELECT SIGNAL OUTPUT TO LCD802-1 CONTROL DRIVER IC805
6	P55	O	$C/\overline{D}$	DATA/CONTROL SELECT SIGNAL OUTPUT TO CONTROL DRIVER IC805
7	P54	O	SI	DATA SIGNAL OUTPUT TO CONTROL DRIVER IC805
8	P53	O	$\overline{CLK}$	CLOCK SIGNAL OUTPUT TO CONTROL DRIVER IC805
9	P52	O	$\overline{RES}$	RESET SIGNAL OUTPUT TO CONTROL DRIVER IC805
10	P51	I		CONNECTED TO GROUND
11	P50	I		CONNECTED TO GROUND
12	P67	I		CONNECTED TO GROUND
13	P66	I		CONNECTED TO GROUND
14	P65	I		CONNECTED TO GROUND
15	P64	I		CONNECTED TO GROUND
16	P63	I		CONNECTED TO GROUND
17	P62	I		CONNECTED TO GROUND
18	P61	I		CONNECTED TO GROUND
19	INI1	I	INT1	SERIAL START SIGNAL INPUT. COMMUNICATE WITH IC801
20	$\overline{WR}$	O	$\overline{WR}$	NOT CONNECTED
21	$\overline{RD}$	O	$\overline{RD}$	NOT CONNECTED
22	$R/\overline{W}$	O	$R/\overline{W}$	NOT CONNECTED
23	SYNC	O	SYNC	NOT CONNECTED
24	RESO	O	RESO	NOT CONNECTED
25	CNVSS		–	CONNECTED TO GROUND
26	$\overline{RESET}$	I	$\overline{RESET}$	$\overline{RESET}$ INPUT
27	NC	–	NC	NOT CONNECTED
28	XI	I	XI	CONNECTED TO CRYSTAL OSCILLATOR (X803)
29	XO	I	XO	CONNECTED TO CRYSTAL OSCILLATOR (X803)
30	NC	–	NC	NOT CONNECTED
31	ϕ	O	E	NOT CONNECTED
32	VSS	–		CONNECTED TO GROUND
33	P27	I		CONNECTED TO GROUND
34	P26	I	SLOCK	ON DETECTION MODE “SYNC” AND TERMINAL IS “HIGH”, INDICATES “SLOCK”
35	P25	I	SD1	ON SCAN, STATION SIGNAL INPUT
36	P24	O	WAKE	“POWER ON” OF IC802 POWER SIGNAL OUTPUT ON “HIGH”, ACTIVATING POWER IS ON.
37	P23	O	MUTE	MUTE SIGNAL OUTPUT. HIGH: MUTE
38	P22	O	POWER	RADIO POWER SUPPLY OUTPUT. HIGH: RADIO ON
39	P21	I/O	SDL	INPUT/OUTPUT FOR E^2PROM DATA READ/WRITE
40	P20	O	SCL	CLOCK OUTPUT FOR E^2PROM DATA READ/WRITE

Pin No.	Port Name	I/O	Signal Name	Description
41	NC	–	NC	NOT CONNECTED
42	P17	O	$\overline{\text{WR}}$	WRITE TO LCD802-2 CONTROL DRIVER IC804
43	P16	O	$\overline{\text{RD}}$	READ TO LCD802-2 CONTROL DRIVER IC804
44	P15	O	RS	RESISTOR SELECT TO LCD802-2 CONTROL DRIVER IC804
45	P14	O	BCS	CHIP SELECT TO IC101
46	P13	O	LAT2	LATCH SIGNAL FOR PLL OUTPUT
47	P12	O	LAT1	LACTH SIGNAL FOR BAND OUTPUT
48	P11	O	DTA	DATA SIGNAL FOR BAND, PLL OUTPUT
49	P10	O	CLK	CLOCK SIGNAL FOR BAND, PLL OUTPUT
50	P07	O	P07	DATA 7 OUTPUT TO IC804
51	P06	O	P06	DATA 6 OUTPUT TO IC804
52	P05	O	P05	DATA 5 OUTPUT TO IC804
53	P04	O	P04	DATA 4 OUTPUT TO IC804
54	P03	O	P03	DATA 3 OUTPUT TO IC804
55	P02	O	P02	DATA 2 OUTPUT TO IC804
56	P01	O	P01	DATA 1 OUTPUT TO IC804
57	P00	O	P00	DATA 0 OUTPUT TO IC804
58	P47	I	P47	CONNECTED TO GROUND
59	P46	I	P46	CONNECTED TO GROUND
60	P45	I	P45	CONNECTED TO GROUND
61	P44	I	P44	CONNECTED TO GROUND
62	P43	I	P43	CONNECTED TO GROUND
63	P42	I	P42	CONNECTED TO GROUND
64	P41	I	P41	CONNECTED TO GROUND
65	P40	I	SMETER	S METER SIGNAL INPUT. A/D CONVERSION IS PERFORMED
66	DA2	O	DA2	NOT CONNECTED
67	DA1	O	DA1	NOT CONNECTED
68	DAVREF	I	DAVREF	CONNECTED TO GROUND
69	ADVREF	I	ADVREF	POWER SUPPLY INPUT (+5 V)
70	AVSS	–	AVSS	CONNECTED TO GROUND
71	AVCC	–	AVCC	POWER SUPPLY INPUT (+5 V)
72	VCC	–	VCC	POWER SUPPLY INPUT (+5 V)
73	VSS	–	VSS	CONNECTED TO GROUND
74	$\overline{\text{SRDY}}$	O	$\overline{\text{SRDY}}$	SERISL READY SIGNAL OUTPUT
75	SCLK	I	SCK	SERIAL CLOCK DATA INPUT
76	SO	O	SSO	SERIAL DATA SIGNAL OUTPUT
77	SI	I	SSI	SERIAL DATA SIGNAL INPUT
78	P33	O	SREQ	CONNECTED TO GROUND
79	P32	I		CONNECTED TO GROUND
80	NC	–	NC	NOT CONNECTED

4-2. BLOCK DIAGRAM


[SIGNAL BOARD]
[JACK BOARD (1/2)]
[TUNE BOARD]
ANT1 TELESCOPIC ANTENNA
SW601 SENS
LOCAL
NORMAL
DX
601-1
601-3
601-4
ROD ANT RF AMP Q803
J601 AM EXT ANT
T251
FM RF AMP Q251
T252
FM MIX Q252
T253
FM OSC Q254
BUFFER Q253
SWITCH Q14
SWITCH Q13
SWITCH Q8
SWITCH Q15
D12
D17
IC1
NORMAL GAIN CONT Q7
T5 (SW5)
T4 (SW4)
T3 (SW3)
T2 (SW2)
T1 (SW1)
RF AMP (SW4, 5) Q12
RF AMP (SW1-3) Q5
T8
1st MIX Q9
1st MIX Q10
AGC Q6
IF POWER SWITCH Q225
SWITCH Q320
SWITCH Q4
BAND SWITCH IC2
B0-B2
SWITCH Q1-3
MW
LW
FM
FERRITE-ROD ANTENNA
MW RF AMP Q201, 202
AGC Q203
LW RF AMP Q204, 205
AGC Q206
MW POWER SWITCH Q208
LW POWER SWITCH Q209
SWITCH Q210
SWITCH Q505
REG IC506
B+
3 Bit D/A IC102
D0
D1
D2
CLK
BCS
DAT
ADDER IC105
8 Bit D/A IC103
E²P ROM IC101
C MOS 5V IC104
LATCH CONTROL IC505
PLL IC501
PLL Q501
L.P.F Q507
X501
PLL IC502
PLL Q506
BAND SELECT IC3
B0
B1
B2
LAT1
LAT2
BUFFER IC407
MODE SELECT IC408
W/$\overline{\text{N}}$
$\overline{\text{SYNC}}$/SSB
USB/$\overline{\text{LSB}}$
ENV/$\overline{\text{SYNC}}$
TC CONT


【JACK BOARD (2/2)】
【MICRO COMPUTER BOARD】
【KEY BOARD】
FM MIX Q252
T253
CF303
FM OSC Q254
BUFFER Q253
IC301 FM/AM FE IF AMP DET
FM IF
DET
BAND SELECT
AM IN
SD/AGC
RV301
B+
BAND SWITCH Q308
SWITCH Q11
SWITCH Q6
W/N SWITCH Q301
W
N
AM IF
DISCRI
CF305
T301
FE
PLL UNLOCK SWITCH Q304, 305
NORMAL GAIN CONT Q7
SSB SWITCH Q303
SSB/A3 LOCK DET
METER
SSB SWITCH Q315
USB/LSB
SD
SSB SWITCH Q307
CERA LOCK
X301
AM OSC
X302
ENB SWITCH Q302
AGC
D305
SWITCH Q314
PSN2 E/S
RF AMP (SW4, 5) Q12
RF AMP (SW1-3) Q5
T8
1st MIX Q9
1st MIX Q10
T9
XF301 XF302
1st IF AMP Q309
SWITCH Q310
AGC Q8
MUTE Q316
NOISE MUTE Q318, 321
D304
SWITCH Q322
IF POWER SWITCH Q225
SWITCH Q320
SWITCH Q4
SWITCH Q505
REG IC506
AGC Q311, 312
LATCH CONTROL IC505
PLL IC501
PLL Q501
L.P.F Q503
CONSTANT CURRENT Q502
L.P.F Q507
MIX IC503
1st OSC Q505
1st BUFFER Q504
X501
PLL IC502
PLL Q508
L.P.F Q509
SUB OSC Q510
MIX IC504
IC402
SSB H.P.F IC401
MUTE Q401
HIGH CUT MUTE Q317, 318
MON/ST SWITCH Q402
MPX IC403
RV401
TREBLE
TONE
BASS
LINE OUT IC409
RV402-2
RV403-2
RV404-1
MUTE Q407
TONE AMP Q406
RV402-1
RV403-1
RV404-2
MUTE Q405
TONE AMP Q404
VOLUME
IC402
SWITCH Q403
AF AMP IC405
SWITCH Q602
TC POWER SWITCH Q601
J603 LINE OUT
TAPE
J602 REMOTE
SP101 SPEAKER
J604 (EARPHONES)
J605 DC IN 6V
BATT
BEEP
S METER
MUTE
SDI
6V (BACK UP)
BATT DET
POWER
6V TR
AF POWER SWITCH Q408
REG Q411
POWER SWITCH Q409
POWER SWITCH Q410
T701
DC-DC CONVERTER
OSC Q702
CONTROL Q701
REG IC408
IF+3V
S810-847
S809 10k ← 9k
S801 LOCAL
TIME SET
S802 TIME DIFF
S803 TIME/PROGRAM
S804 LOCAL TIME/UTC
S806 ON/OFF
S805 FREE
S807 LOCK
POWER ← OFF LOCK
LOCK ← REL
S808 DIAS LOCK
6V To 3V DC-DC CONVERTER IC817
+6V BU
+3V CPU
RESET SWITCH IC815
S848 RESET
ROTALY ENCORDER
ENCORDER IC807-809
DETECTOR IC814
VOLTAGE Q808
LED DRIVE Q801, 812
D813-818
+6V
+6V TR
D807
IC816
IC807
KEY INPUT TIMER (CPU1) IC801
NO PULL UP
SREQ
X801
X802
OFF LOCK
RF LOCK
RESET
INT1
CNTR
EMPTY
EXCHG
LIGHT
LCD801 LIQUID CRYSTAL DISPLAY
SO
SI
SRDY
SCK
S START
PRE
SCK SWITCH Q805
S START SWITCH Q806
RESET SWITCH Q807
BROADCAST E²P ROM IC806
SCL
SDA
CLK
BCS
DAT
LAT1
LAT2
STAITION SELECT MEMORY CONT (CPU2) IC802
X803
BUSY
CS
C/D
CLK
RES
FREQUENCY INDICATION IC805
LCD802 LIQUID CRYSTAL DISPLAY
+5V TR
RV801
LCD CONTRAST
ALPHABETICAL /NUMERICAL INDICATION IC804
ALPHABETICAL /NUMERICAL INDICATION IC803
FR
LP
SHCL
VL3
VL2
VL CO
LM
IOA1
V3
V2
V5
A0
RD
WR
POWER
BEEP
S METER
MUTE
SDI
SDO
WAKE
+6V BU
BATT DET
+6V TR
SWITCH Q811
SWITCH Q810
+5V TR
SWITCH Q804
6V TO 5V DC-DC CONVERTER IC812
SWITCH Q802
+5V CPU
SWITCH Q803
REG IC811
+3V BU

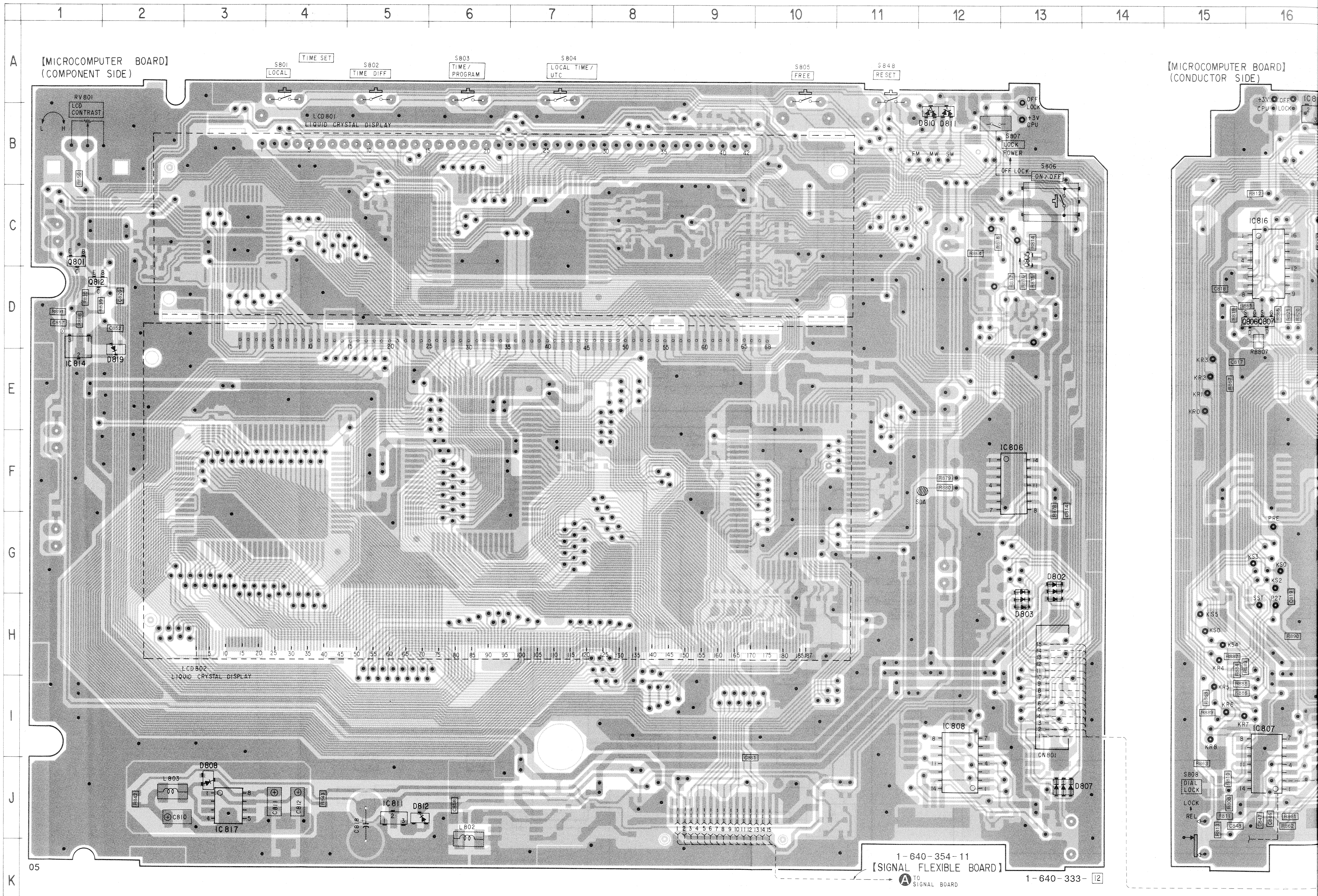

[JACK BOARD (2/2)]
[MICRO COMPUTER BOARD]
[KEY BOARD]
IC301 FM/AM FE IF AMP DET
FM IF
BAND SELECT
AM IN
AM IF
DISCRI
FE
SSB/A3 LOCK DET
USB/LSB
CERA LOCK
AM OSC
AGC
PSN2 E/S
DET
SD/AGC
METER
SD
RV301
CF303
CF305
T301
X301
X302
XF301 XF302
BAND SWITCH Q305
SWITCH Q11
W/N SWITCH Q301
PLL UNLOCK SWITCH Q304, 305
SSB SWITCH Q303
SSB SWITCH Q315
SSB SWITCH Q307
ENB SWITCH Q302
SWITCH Q314
MUTE Q316
NOISE MUTE Q318, 321
SWITCH Q322
D305
D304
1st IF AMP Q308
SWITCH Q310
AGC Q311, 312
CONSTANT CURRENT Q802
1st OSC Q606
1st BUFFER Q604
SUB OSC Q610
IC402
SSB H.P.F IC401
MUTE Q401
HIGH CUT MUTE Q317, 318
MPX IC403
MON/ST SWITCH Q402
RV401
TREBLE
TONE
BASS
RV402-2
RV403-2
RV402-1
RV403-1
TONE AMP Q405
TONE AMP Q404
MUTE Q407
MUTE Q406
RV404-1
RV404-2
VOLUME
LINE OUT IC409
SWITCH Q403
AF AMP IC405
SWITCH Q602
TC POWER SWITCH Q601
J603 LINE OUT
TAPE
J602 REMOTE
SP101 SPEAKER
J604 (EARPHONES)
J605 DC IN 6V
BATT
BEEP
S METER
MUTE
SDI
6V (BACK UP)
BATT DET
POWER
6V TR
AF POWER SWITCH Q408
B+
REG Q411
POWER SWITCH Q409
POWER SWITCH Q410
T701
DC-DC CONVERTER OSC Q702 CONTROL Q701
IF+3V
REG IC408
S810-847
S809 10k ← 8k
IC816
D807
IC807
NO PULL UP
KEY INPUT TIMER (CPU1) IC801
LCD801 LIQUID CRYSTAL DISPLAY
SREQ
X801
X802
OFF LOCK
RF LOCK
RESET
INT1
CNTR
EMPTY
EXCHG
LIGHT
S801 LOCAL
TIME SET
S802 TIME DIFF
S803 TIME/PROGRAM
S804 LOCAL TIME/UTC
S805 ON/OFF
S806 FREE
S807 LOCK
POWER ← OFF LOCK
LOCK ← REL
S808 DIAL LOCK
+3V CPU
6V To 3V DC-DC CONVERTER IC817
+6V BU
RESET SWITCH IC815
S848 RESET
ROTALY ENCORDER
ENCORDER IC807-809
DETECTOR IC814
VOLTAGE Q808
LED DRIVE Q801, 812
D813-818
+6V
+5V TR
CLK
BCS
DAT
LAT1
LAT2
SO
SI
SRDY
SCK
S START
SCK SWITCH Q805
S START SWITCH Q806
RESET SWITCH Q807
BROADCAST E²P ROM IC806
SCL
SDA
PRE
STAITION SELECT MEMORY CONT (CPU2) IC802
X803
BUSY
CS
C/D
CLK
RES
FREQUENCY INDICATION IC805
LCD802 LIQUID CRYSTAL DISPLAY
+5V TR
RV801 LCD CONTRAST
FR LP SHCL SO VL3 VL2 VL CO
LM LP SCL IOA1 V3 V2 V6
ALPHABETICAL /NUMERICAL INDICATION IC804
ALPHABETICAL /NUMERICAL INDICATION IC803
A0
RD
WR
POWER
BEEP
S METER
MUTE
SDI
SDO
WAKE
SWITCH Q811
SWITCH Q810
SWITCH Q804
6V TO 5V DC-DC CONVERTER IC812
SWITCH Q802
+5V CPU
SWITCH Q803
REG IC811
+3V BU
+6V BU
+6V TR
BATT DET

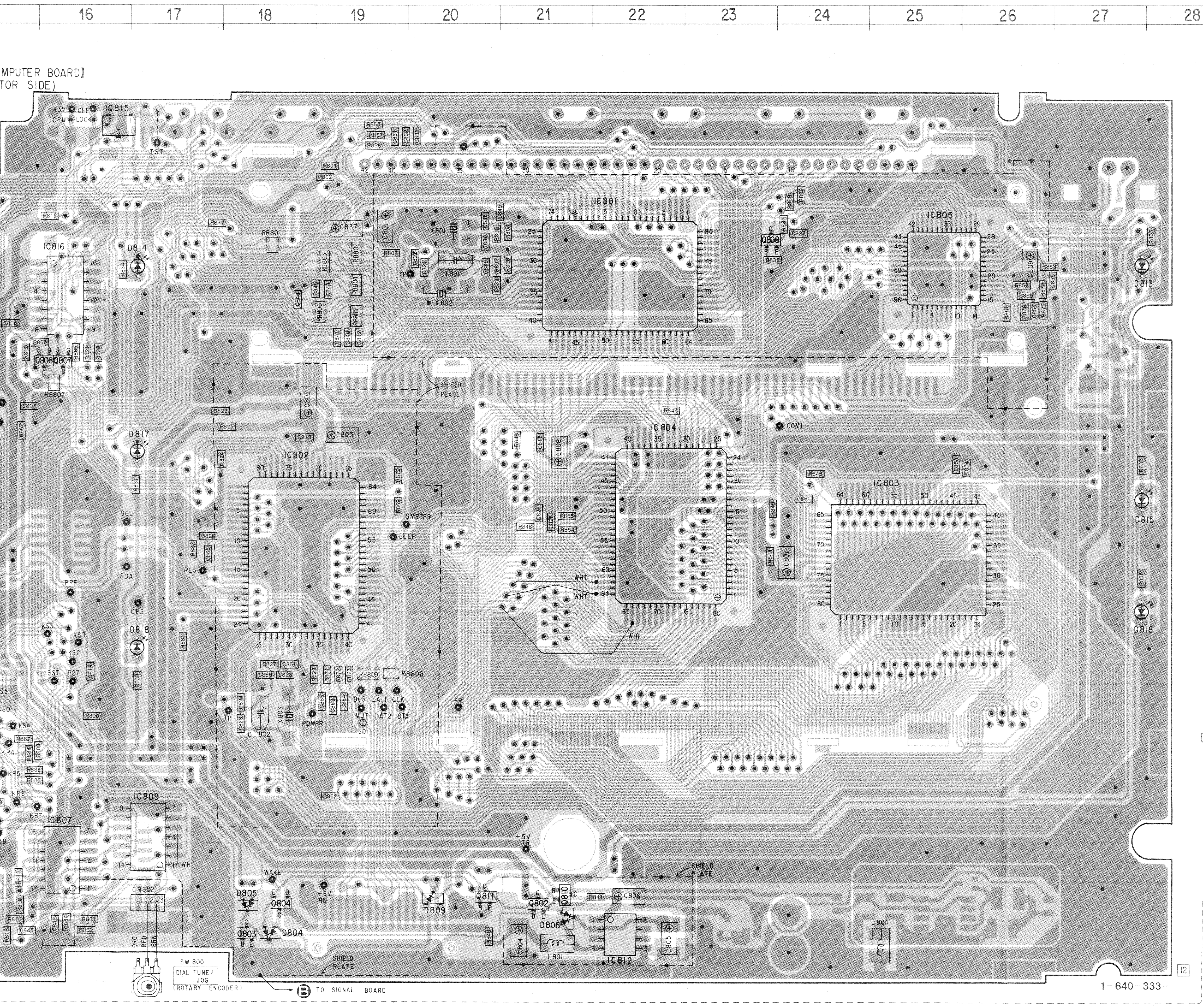
4-3. MICROCOMPUTER SECTION PRINTED WIRING BOARDS

- See page 54 for Semiconductor Lead Layouts.

- **Semiconductor Location**

Ref. No.	Location
D802	G-13
D803	H-13
D804	J-18
D805	J-18
D806	J-21
D807	J-13
D808	J-3
D809	J-20
D810	B-12
D811	B-12
D812	J-5
D813	C-27
D814	C-17
D815	F-27
D816	G-27
D817	E-17
D818	G-17
D819	E-2
IC801	C-22
IC802	F-18
IC803	F-25
IC804	F-22
IC805	C-25
IC806	F-13
IC807	J-16
IC808	I-12
IC809	I-17
IC811	J-5
IC812	J-22
IC814	D-1
IC815	B-16
IC816	C-16
IC817	J-3
Q801	C-1
Q802	J-21
Q803	J-18
Q804	J-18
Q805	C-13
Q806	D-16
Q807	D-16
Q808	C-23
Q810	J-21
Q811	J-20
Q812	D-1


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
A
B
C
D
E
F
G
H
I
J
K
[MICROCOMPUTER BOARD]
(COMPONENT SIDE)
[MICROCOMPUTER BOARD]
(CONDUCTOR SIDE)
TIME SET
S801 LOCAL
S802 TIME DIFF
S803 TIME/PROGRAM
S804 LOCAL TIME/UTC
S805 FREE
S848 RESET
RV801 LCD CONTRAST
LCD801 LIQUID CRYSTAL DISPLAY
LCD802 LIQUID CRYSTAL DISPLAY
D810 D811
OFF LOCK
+3V CPU
S807 LOCK POWER
OFF LOCK
S806 ON/OFF
FM MW SW
Q801
Q812
IC814
D819
IC806
SDA
D802
D803
IC808
CN801
D807
D808
L803
C810
IC817
C811
C812
IC811
D812
C818
L802
IC816
Q806 Q807
IC807
S808 DIAL LOCK
LOCK
REL
1-640-354-11
[SIGNAL FLEXIBLE BOARD]
A TO SIGNAL BOARD
1-640-333-12
05

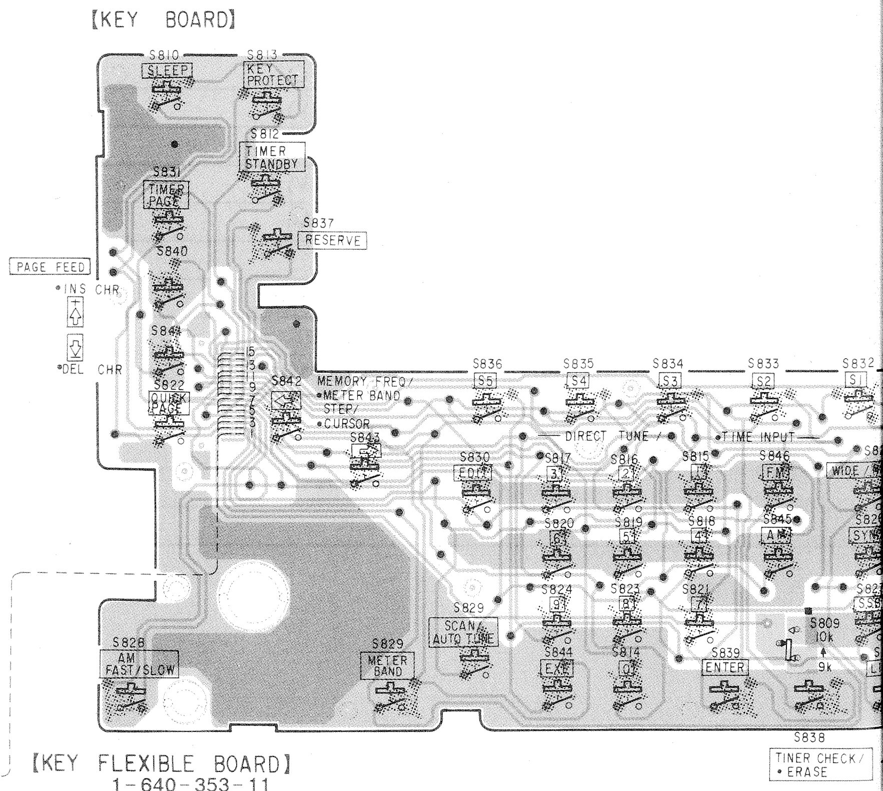

16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
MPUTER BOARD]
TOR SIDE)
IC815
TST
IC816
D814
IC801
X801
CT801
X802
IC805
D813
SHIELD PLATE
IC804
COM1
IC802
IC803
D817
D815
D816
S METER
BEEP
SCL
SDA
PRE
RES
CP2
D818
WHT
KS3
KS0
KS2
SST
P27
X803
CT802
POWER
BOS
LAT1
CLK
MUT
LAT2
DTA
SDI
FR
IC809
IC807
CN802
ORG
RED
BRN
SW 800
DIAL TUNE/JOG
(ROTARY ENCODER)
B TO SIGNAL BOARD
WAKE
D805
Q804
Q803
D804
+6V BU
+5V TR
D809
Q811
Q802
Q810
D806
L801
IC812
L804
SHIELD PLATE
1-640-333-

Note on Printed Wiring Board:

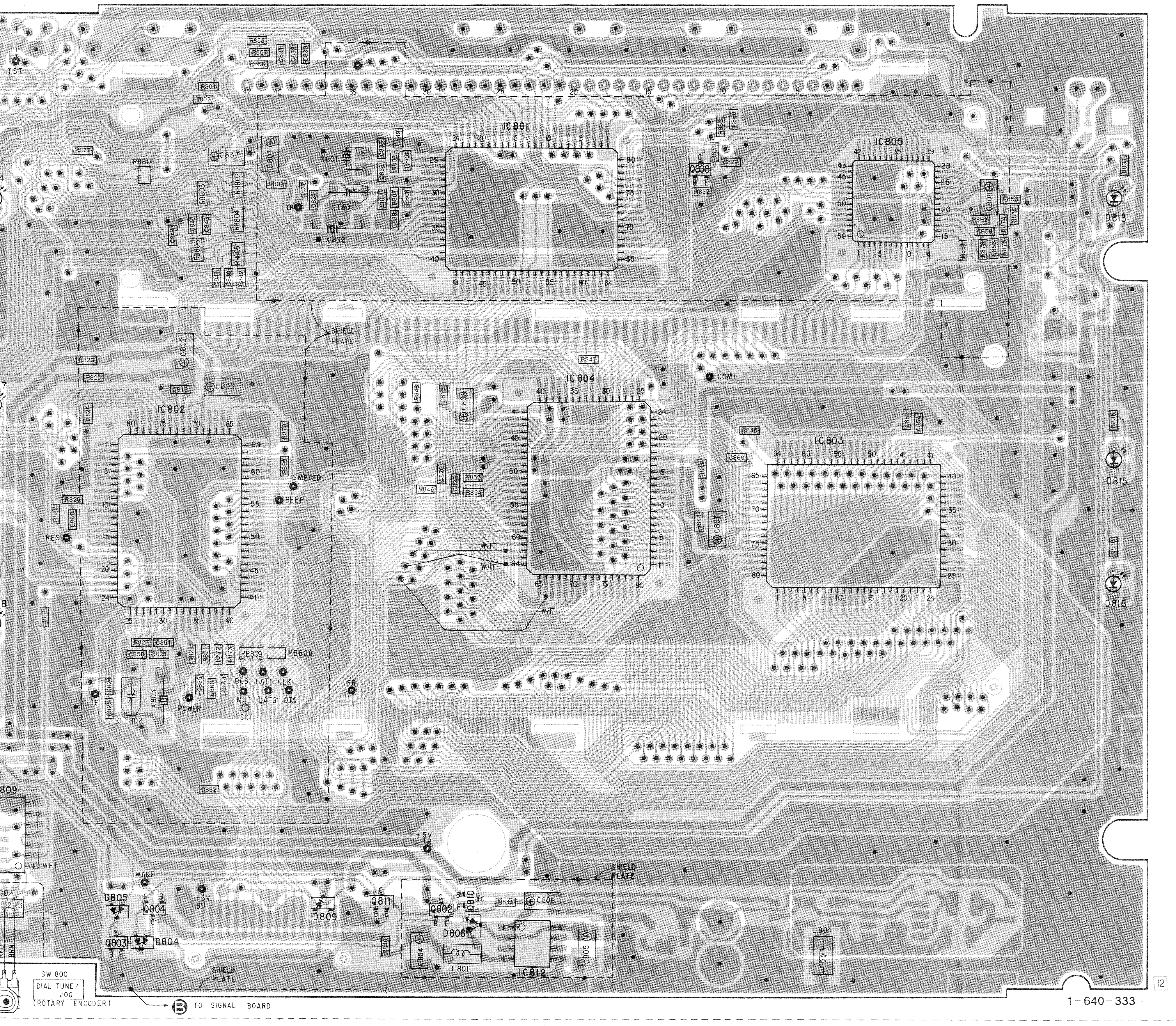
- ■ : parts mounted on the conductor
- ⬚ : indicates side identified with part
- ● : Through hole.
- ▨ : Pattern on the side which is seen
- ▨ : Pattern of the rear side.

Note on Schematic Diagram:

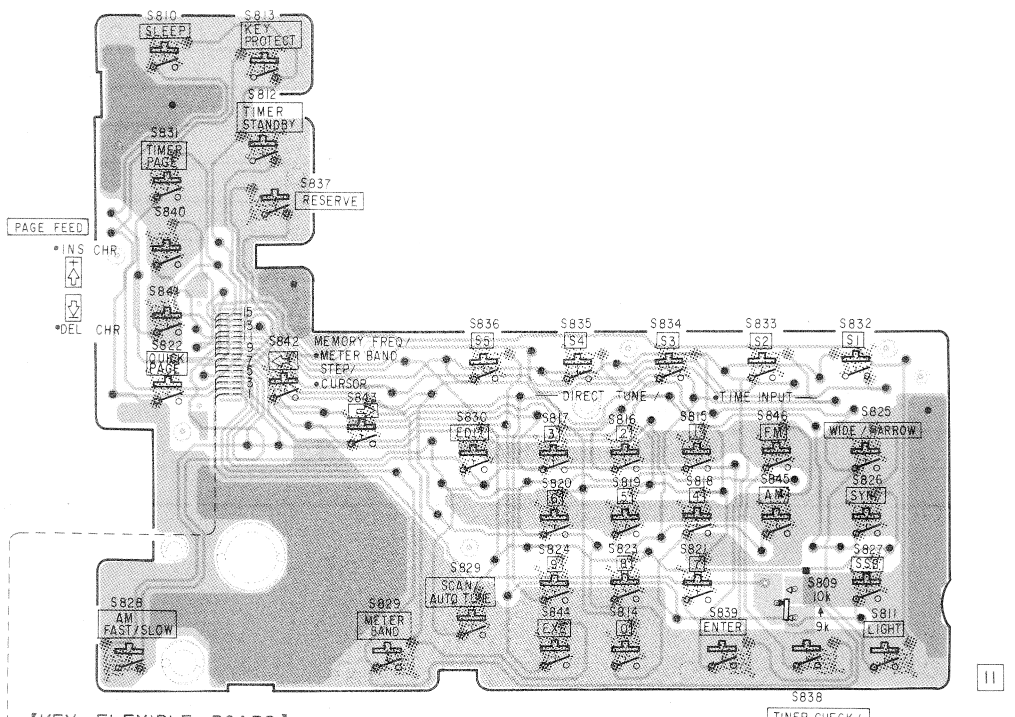
- All capacitors are in μF unless otherwis 50 WV or less are not indicated exc and tantalums.
- All resistors are in Ω and ¼ W or les specified.
- ▬ : B + Line.
- ▭ : adjustment for repair.
- Power voltage is dc 6 V and fed with regura from external power voltage jack.
  no mark : Common
- Voltages are taken with a VOM (10 MΩ/V). Voltage variations may be noted due t tolerances.
- Signal path.
  ⇨ : FM


[KEY BOARD]
S810 SLEEP
S813 KEY PROTECT
S812 TIMER STANDBY
S831 TIMER PAGE
S837 RESERVE
S840
PAGE FEED
• INS CHR
• DEL CHR
S843
S822 QUICK PAGE
S842
MEMORY FREQ/
• METER BAND
STEP/
• CURSOR
S836
S835
S834
S833
S832
DIRECT TUNE
• TIME INPUT
S830 EDIT
S846 FM
WIDE
S845 AM
S829 SCAN/AUTO TUNE
S828 AM FAST/SLOW
S829 METER BAND
S839 ENTER
S809 10k
S838 TIMER CHECK/ • ERASE
[KEY FLEXIBLE BOARD]
1-640-353-11

17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33


IC801
IC802
IC803
IC804
IC805
IC812
X801
X802
X803
CT801
CT802
SHIELD PLATE
COMI
SMETER
BEEP
RES
TP
POWER
BCS
LATI
CLK
MUT
LAT2
DTA
SDI
FR
+5V TR
WAKE
+6V BU
Q803
Q804
Q802
Q808
Q810
Q811
D804
D805
D806
D809
D813
D815
D816
L801
L804
WHT
TST
SW 800
DIAL TUNE/JOG
(ROTARY ENCODER)
B TO SIGNAL BOARD
12
1-640-333-

【KEY BOARD】


S810 SLEEP
S813 KEY PROTECT
S812 TIMER STANDBY
S831 TIMER PAGE
S837 RESERVE
S840
PAGE FEED
•INS CHR
•DEL CHR
S843
S841 QUICK PAGE
S842
MEMORY FREQ/
•METER BAND
STEP/
•CURSOR
S836 S5
S835 S4
S834 S3
S833 S2
S832 S1
DIRECT TUNE
•TIME INPUT
S825 WIDE/NARROW
S830 EDIT
S817 3
S816 2
S815 1
S846 FM
S845 AM
S826 SYNC
S827 SSB
S820 6
S819 5
S818 4
S824 9
S823 8
S821 7
S829 SCAN/AUTO TUNE
S844 EXE
S814 0
S839 ENTER
S809 10k
9k
S811 LIGHT
S828 AM FAST/SLOW
S829 METER BAND
S838
TIMER CHECK/•ERASE
11

【KEY FLEXIBLE BOARD】
1-640-353-11

1-640-219-

Note on Printed Wiring Board:

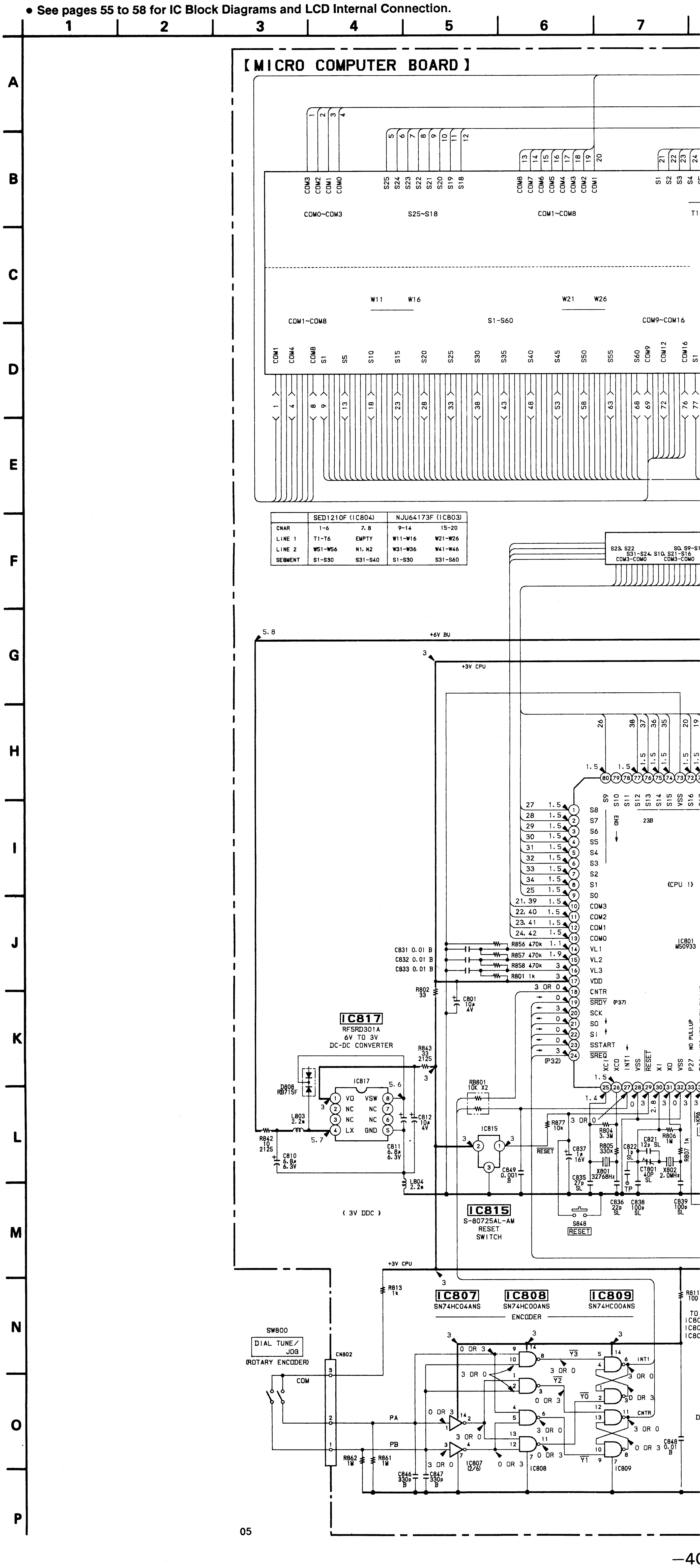
- ■ : parts mounted on the conductor side.
- ⬚← : indicates side identified with part number.
- ● : Through hole.
- ▨ : Pattern on the side which is seen.
- ▨ : Pattern of the rear side.

Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- ▬ : B + Line.
- ▭ : adjustment for repair.
- Power voltage is dc 6 V and fed with regurated dc power supply from external power voltage jack.
  no mark : Common
- Voltages are taken with a VOM (10 MΩ/V).
  Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM

4-4. MICROCOMPUTER SECTION SCHEMATIC DIAGRAM

- **See pages 55 to 58 for IC Block Diagrams and LCD Internal Connection.**


1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
[MICRO COMPUTER BOARD]
COM0~COM3
S25~S18
COM1~COM8
COM1~COM8
S1-S60
COM9~COM16
W11 W16
W21 W26
CNAR
LINE 1
LINE 2
SEGMENT
SED1210F (IC804)
NJU64173F (IC803)
1-6
7, 8
9-14
15-20
T1-T6
EMPTY
W11-W16
W21-W26
W51-W56
N1, N2
W31-W36
W41-W46
S1-S30
S31-S40
S1-S30
S31-S60
+6V BU
+3V CPU
IC801
M50933
(CPU 1)
IC817
RF5RD301A
6V TO 3V
DC-DC CONVERTER
IC815
S-80725AL-AM
RESET
SWITCH
(3V DDC)
S848
RESET
IC807
SN74HC04ANS
IC808
SN74HC00ANS
IC809
SN74HC00ANS
ENCODER
SW800
DIAL TUNE/
JOG
(ROTARY ENCODER)
CN802
COM
PA
PB
05

- **Signs for LCD on the Schematic Diagram Description.**

The character display on LCD802 is activated by IC803 and IC804.

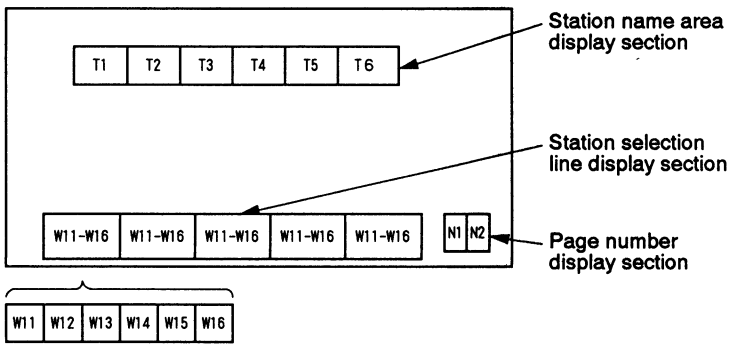
Sign indication of LCD802 on the schematic diagram	
Section	Indication on Schematic Diagram
Station Name Area Display	T1 – T6
Station Selection Line Display	W11 – W16…W51 – W56
Page Number Display	N1, N2

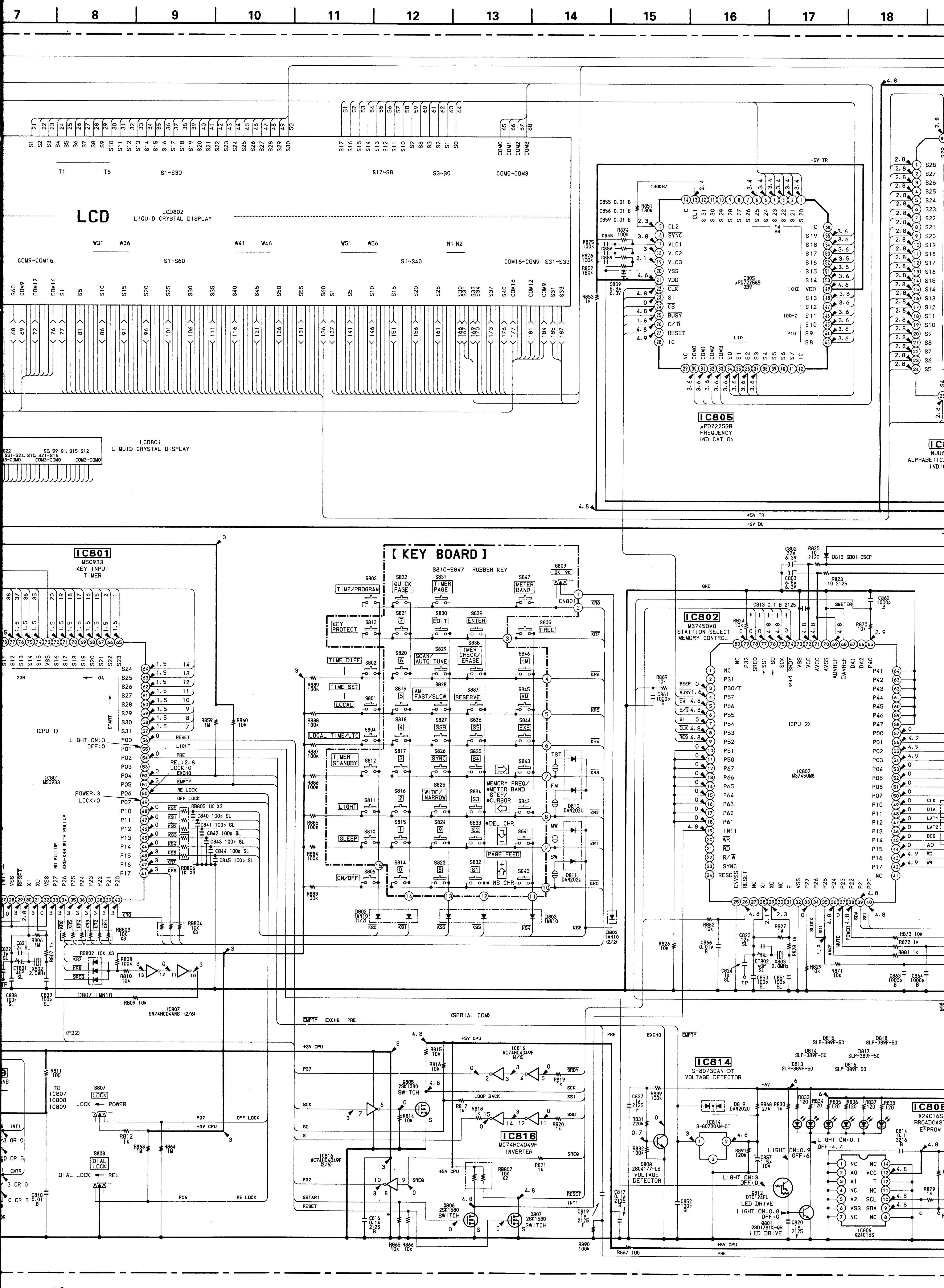
LCD driver IC804 drives 14 characters, T1 – T6, W51 – W56, N1, N2.

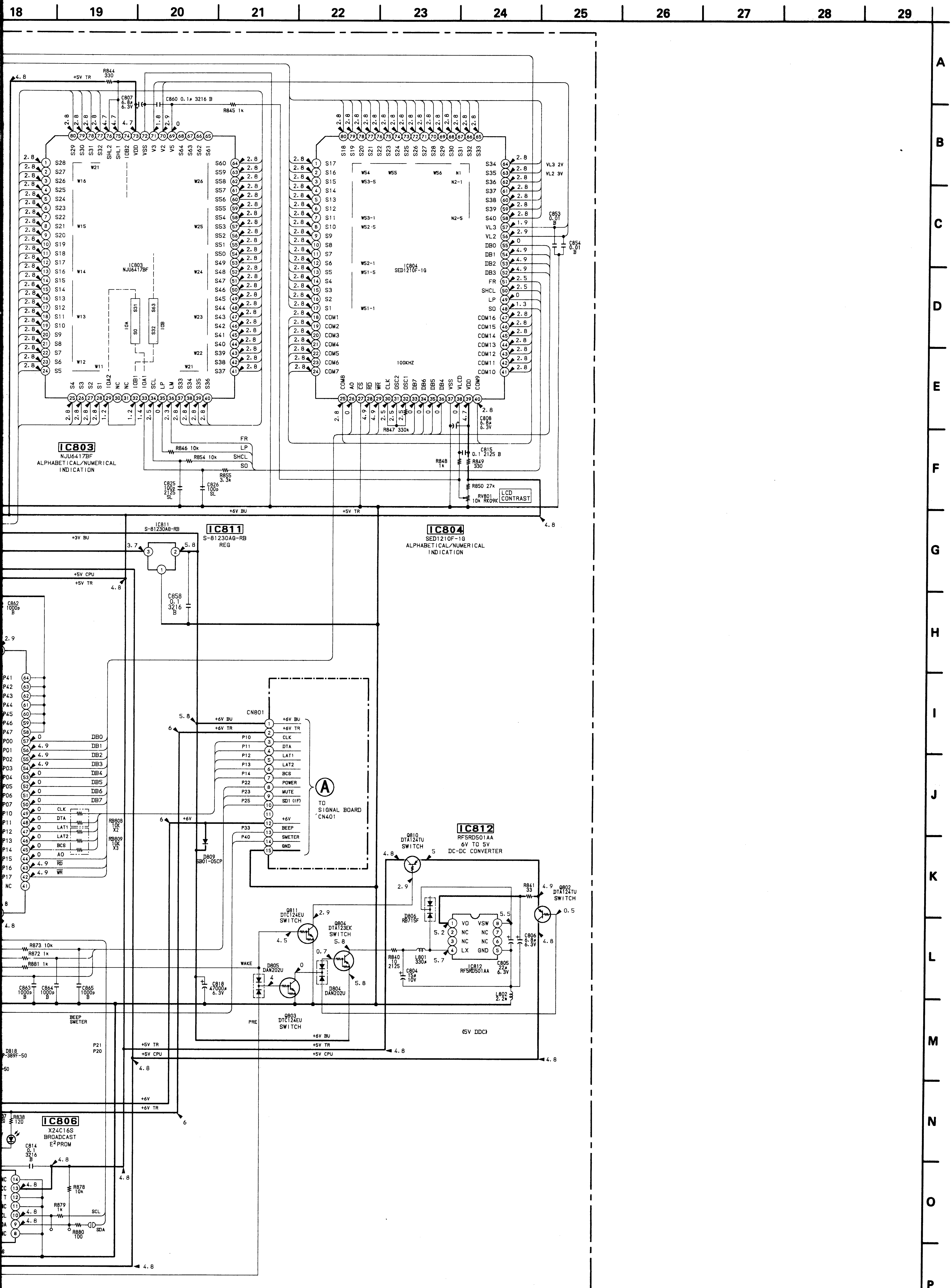
IC803 drives 24 characters, W11 – W16, W21 – W26, W31 – W36, W41 – W46.

Ex.: Characters displayed on W11 section are driven by IC804 COM1 – COM8 and IC803 S1 – S5.

LCD802


T1
T2
T3
T4
T5
T6
Station name area display section
Station selection line display section
W11-W16
N1
N2
Page number display section
W11
W12
W13
W14
W15
W16

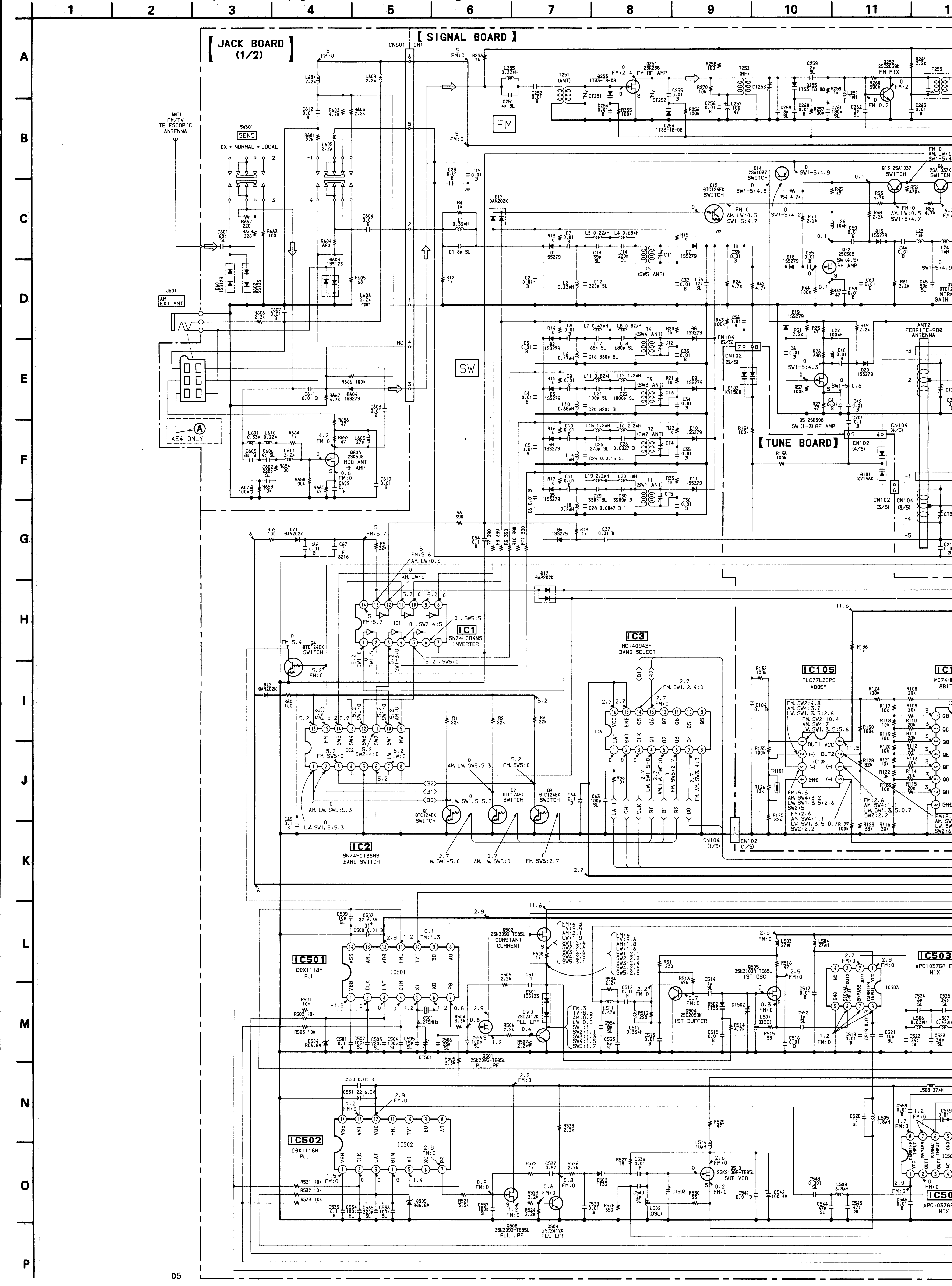

7
8
9
10
11
12
13
14
15
16
17
18
LCD
LCD802
LIQUID CRYSTAL DISPLAY
S1~S30
S17~S8
S3~S0
COM0~COM3
COM9~COM16
S1~S60
S1~S40
COM16~COM9
S31~S33
LCD801
LIQUID CRYSTAL DISPLAY
IC805
µPD7225GB
FREQUENCY
INDICATION
130KHZ
+5V TR
+6V BU
IC801
M50933
KEY INPUT
TIMER
(CPU 1)
LIGHT ON:3
OFF:0
POWER:3
LOCK:0
REL:2.8
LOCK:0
NO PULLUP
KR0-KR8 WITH PULLUP
[KEY BOARD]
S810-S847 RUBBER KEY
TIME/PROGRAM
QUICK PAGE
TIMER PAGE
METER BAND
KEY PROTECT
EDIT
ENTER
FREE
TIME DIFF
SCAN/AUTO TUNE
TIMER CHECK/ERASE
FM
TIME SET
LOCAL
AM FAST/SLOW
RESERVE
AM
LOCAL TIME/UTC
SSB
EXE
TIMER STANDBY
SYNC
LIGHT
WIDE/NARROW
MEMORY FREQ/
●METER BAND
STEP/
●CURSOR
SLEEP
●DEL CHR
PAGE FEED
ON/OFF
●INS CHR
CN801
TST
MW
SW
D810 DAN202U
D811 DAN202U
D802 1MN10
D803 1MN10
IC802
M37450M8
STAITION SELECT
MEMORY CONTROL
(CPU 2)
D812 SB01-05CP
GND
SMETER
BEEP
BUSY
CS
C/D
SI
CLK
RES
SLOCK
SDI
MUTE
POWER
SDA
SCL
WAKE
IC807
SN74HC04ANS (2/6)
D807 1MN10
(SERIAL COM)
EMPTY
EXCHG
PRE
+3V CPU
+5V CPU
P37
SCK
SO
SI
P32
SSTART
RESET
IC816
MC74HC4049F
INVERTER
Q805 2SK1580 SWITCH
Q806 2SK1580 SWITCH
Q807 2SK1580 SWITCH
LOOP BACK
SRDY
SSI
SSO
SREQ
INT1
RB807 10K X2
S807 LOCK
LOCK ← POWER
S808 DIAL LOCK
DIAL LOCK ← REL
P07
OFF LOCK
P06
RE LOCK
TO IC807 IC808 IC809
IC814
S-80730AN-DT
VOLTAGE DETECTOR
D819 DAN202U
Q808 2SC4177-L6 VOLTAGE DETECTOR
Q812 DTC124EU LED DRIVE
Q801 2SD1781K-QR LED DRIVE
LIGHT ON:3
OFF:0
LIGHT ON:0.8
OFF:0
LIGHT ON:0.9
OFF:6
LIGHT ON:0.1
OFF:4.7
D813 SLP-389F-50
D814 SLP-389F-50
D815 SLP-389F-50
D816 SLP-389F-50
D817 SLP-389F-50
D818 SLP-389F-50
IC806
X24C16S
BROADCAST
E²PROM
NJU6
ALPHABETICA
INDI



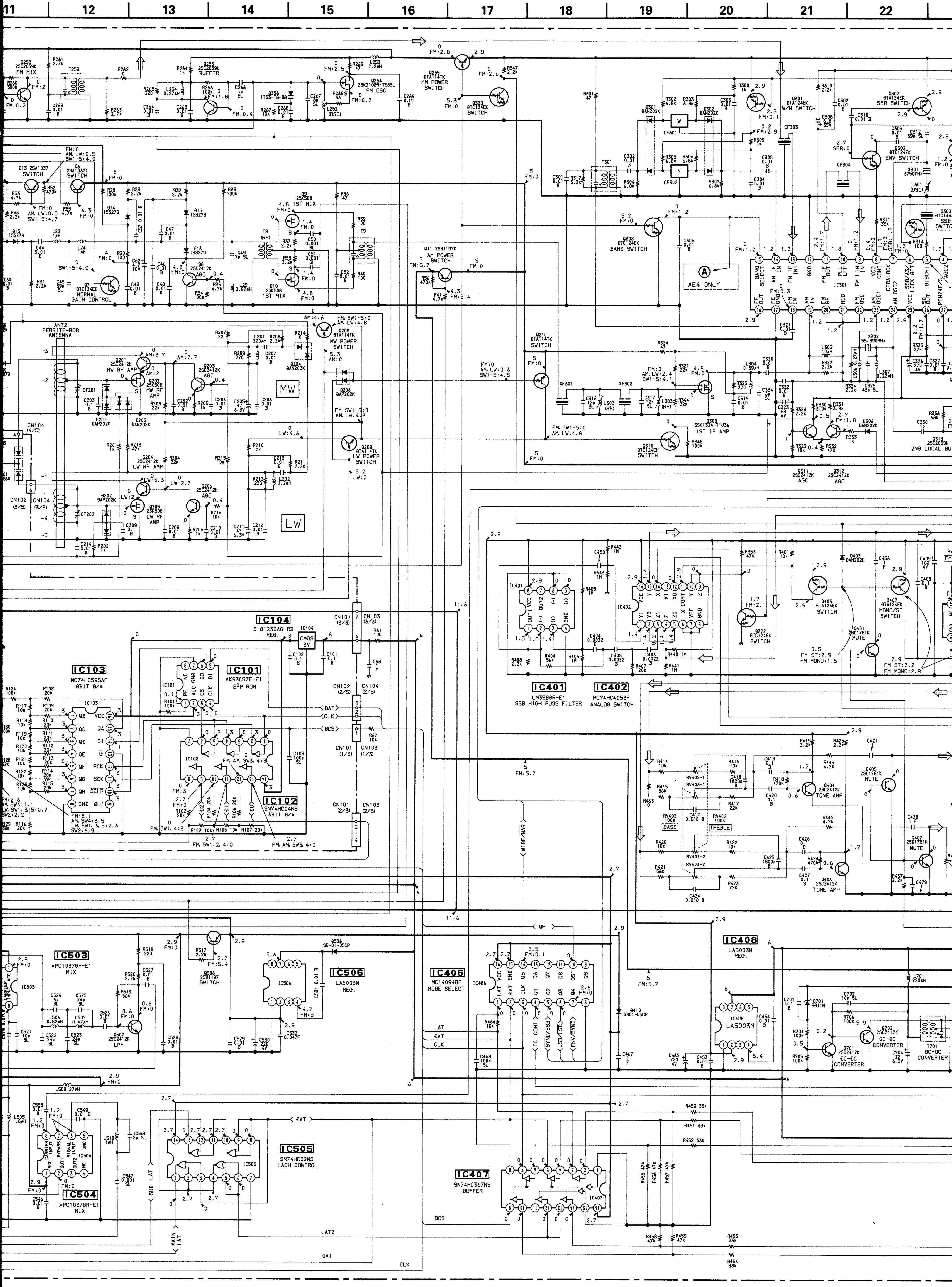
IC803
NJU6417BF
ALPHABETICAL/NUMERICAL INDICATION
IC804
SED1210F-1G
ALPHABETICAL/NUMERICAL INDICATION
IC811
S-81230AG-RB
REG
IC812
RF5RD501AA
6V TO 5V DC-DC CONVERTER
IC806
X24C16S
BROADCAST
E²PROM
CN801
TO SIGNAL BOARD CN401
LCD CONTRAST
RV801 10k RK09K
Q810 DTA124TU SWITCH
Q802 DTA124TU SWITCH
Q811 DTC124EU SWITCH
Q804 DTA123EK SWITCH
Q803 DTC124EU SWITCH
D805 DAN202U
D804 DAN202U
D806 RB715F
D809 SB01-05CP
(5V DDC)
+6V BU
+5V TR
+3V BU
+5V CPU
+6V
WAKE
PRE
BEEP
SMETER
100KHZ
18
19
20
21
22
23
24
25
26
27
28
29
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P

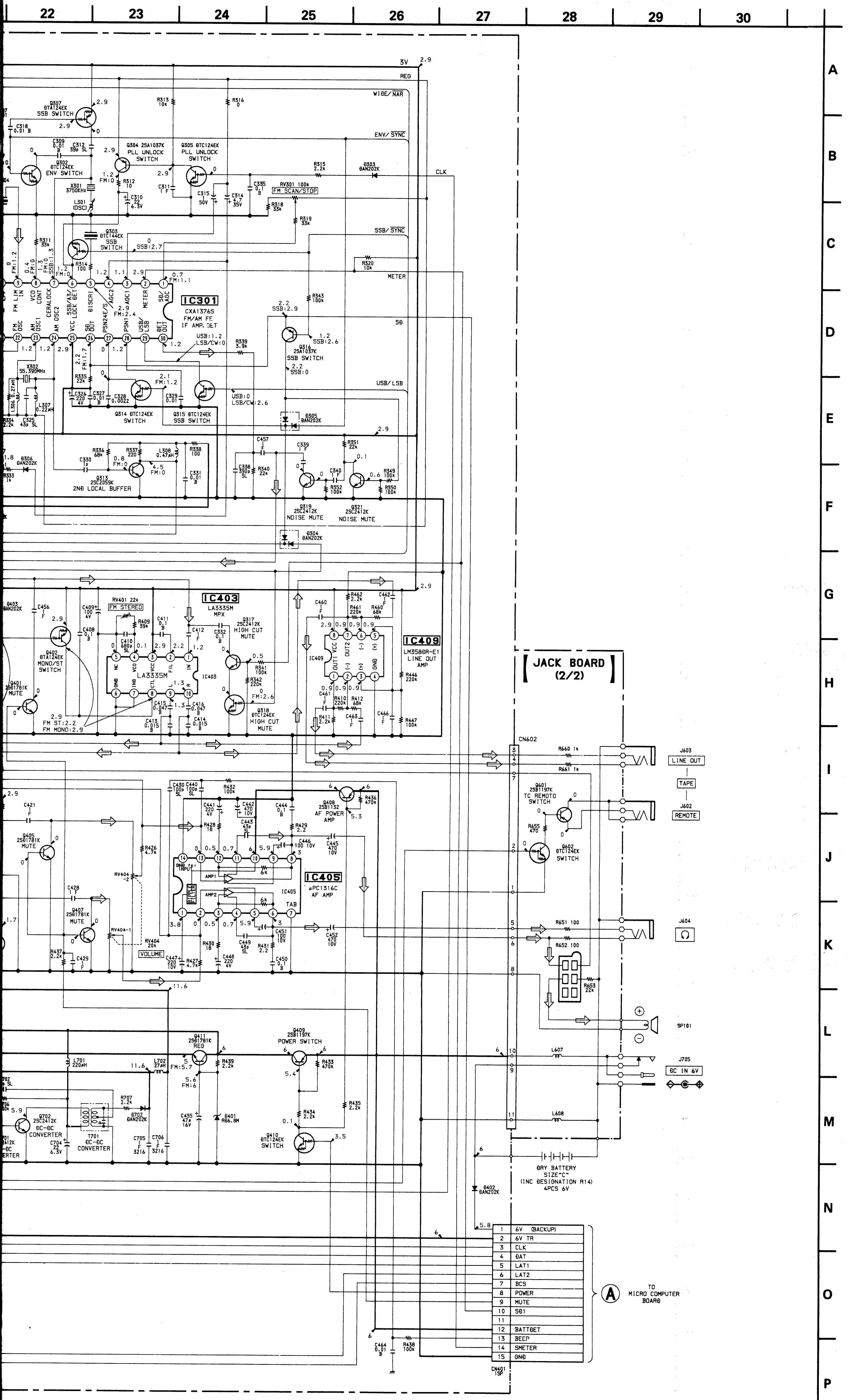
4-5. SIGNAL SECTION SCHEMATIC DIAGRAM

- See pages 55 to 58 for IC Block Diagrams.
- See page 38 for note on Schematic Diagram.



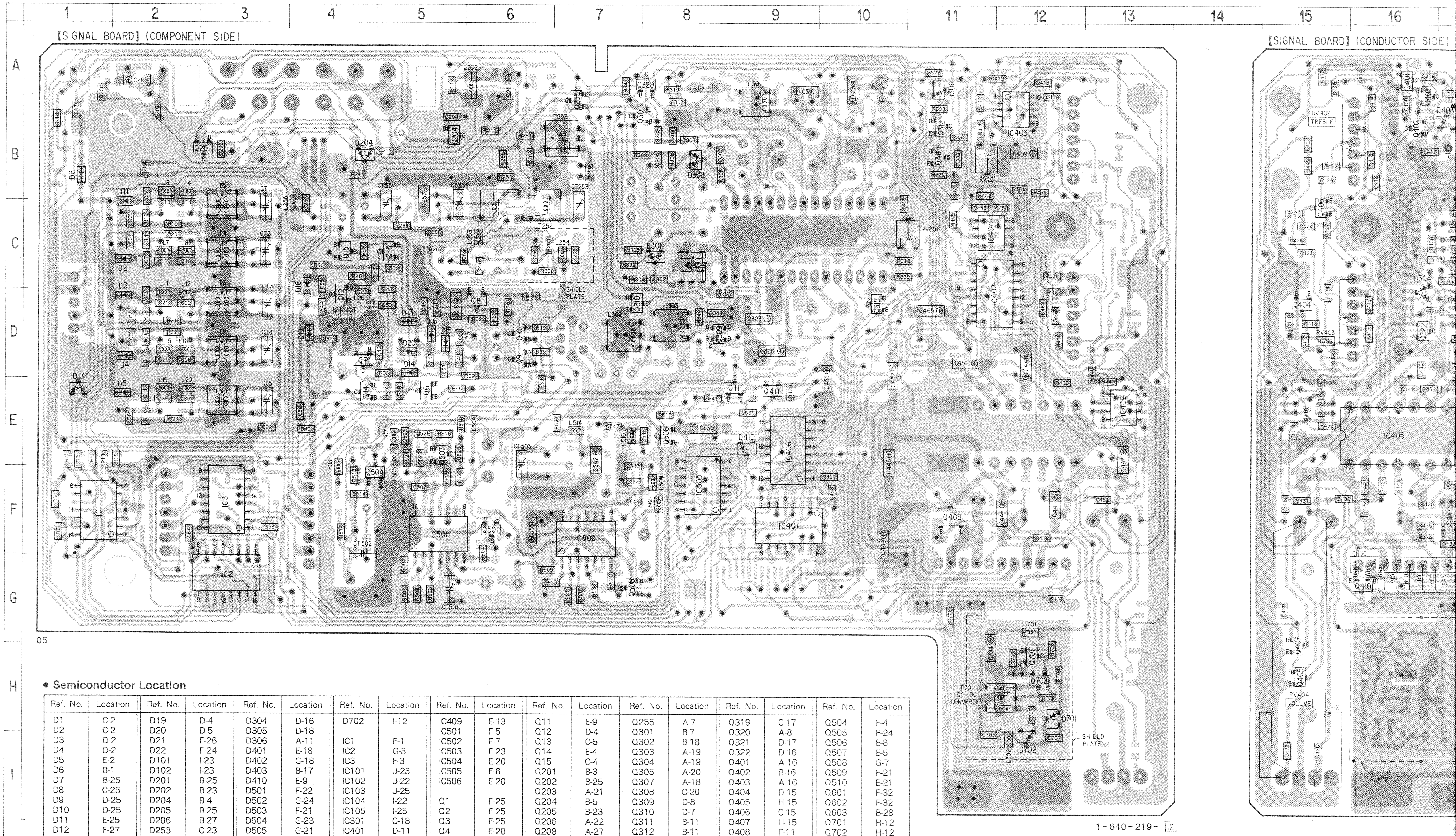
JACK BOARD (1/2)
SIGNAL BOARD
TUNE BOARD
ANT1 FM/TV TELESCOPIC ANTENNA
SW601 SENS
DX ↔ NORMAL ↔ LOCAL
J601 AM EXT ANT
AE4 ONLY
CN601
CN1
FM
SW
Q251 2SK238 FM RF AMP
T251 (ANT)
T252 (RF)
Q252 2SC2059K FM MIX
Q603 2SK508 ROD ANT RF AMP
Q14 2SA1037 SWITCH
Q15 DTC124EK SWITCH
Q13 2SA1037 SWITCH
Q12 2SK508 SW (4.5) RF AMP
Q5 2SK508 SW (1-3) RF AMP
ANT2 FERRITE-ROD ANTENNA
CN104
CN102
IC1 SN74HC04NS INVERTER
IC2 SN74HC138NS BAND SWITCH
IC3 MC14094BF BAND SELECT
IC105 TLC27L2CPS ADDER
Q4 DTC124EK SWITCH
Q1 DTC124EK SWITCH
Q2 DTC124EK SWITCH
Q3 DTC124EK SWITCH
IC501 CBX1118M PLL
IC502 CBX1118M PLL
Q502 2SK2090-TE85L CONSTANT CURRENT
Q501 2SK2090-TE85L PLL LPF
Q503 2SC2412K PLL LPF
Q504 2SC2059K 1ST BUFFER
Q505 2SK2100R-TE85L 1ST OSC
Q508 2SK2090-TE85L PLL LPF
Q509 2SC2412K PLL LPF
Q510 2SK2100R-TE85L SUB VCO
IC503 μPC1037GR-E MIX
L501 (OSC)
L502 (OSC)
X501 6.275MHz
05


11
12
13
14
15
16
17
18
19
20
21
22
Q252 2SC2059K FM MIX
T253
Q253 2SC2059K BUFFER
Q254 2SK2100R-TE85L FM OSC
L252 (OSC)
Q255 ΘTA114TK FM POWER SWITCH
Q320 ΘTC124EK SWITCH
Q301 ΘTA124EK W/N SWITCH
CF301
CF302
CF303
CF304
T301
Q307 ΘTA124EK SSB SWITCH
Q302 ΘTA124EK ENV SWITCH
X301 3750KHz
L301 (OSC)
Q13 2SA1037 SWITCH
Q6 2SA1037K SWITCH
Q9 2SK508 1ST MIX
Q10 2SK508 1ST MIX
T8 (RF)
T9
Q8 2SC2412K AGC
Q7 ΘTC124EK NORMAL GAIN CONTROL
Q11 2SB1197K AM POWER SWITCH
Q308 ΘTC124EK BAND SWITCH
Ⓐ AE4 ONLY
IC301
BAND SELECT
AM IF IN
FM IF IN
GND
FM IF OUT
PLL LPF
FM LIM IN
VCO CONT
CERALOCK
SSB/A3/LOCK DET
DISCRI
FE OUT
FE GND
AM IN
FM IN
REG
FM OSC
AM OSC1
AM OSC2
VCC
SD OUT
PSN24E/S
X302 55.390MHz
ANT2 FERRITE-ROD ANTENNA
Q201 2SC2412K MW RF AMP
Q202 2SK508 MW RF AMP
Q203 2SC2412K AGC
Q208 ΘTA114TK MW POWER SWITCH
Q206 ΘAP202K
MW
Q204 2SC2412K LW RF AMP
Q205 2SK508 LW RF AMP
Q206 2SC2412K AGC
Q209 ΘTA114TK LW POWER SWITCH
LW
CN104 (4/5)
CN102 (3/5)
CN104 (3/5)
Q210 ΘTA114TK SWITCH
XF301
XF302
L302 (RF)
L303 (RF)
Q309 3SK132A-T1U36 1ST IF AMP
Q310 ΘTC124EK SWITCH
Q311 2SC2412K AGC
Q312 2SC2412K AGC
Q313 2SC2059K 2ND LOCAL BUFFER
IC104 S-81230AG-RB REG.
IC103 MC74HC595AF 8BIT D/A
IC101 AK93C57F-E1 E²P ROM
IC102 SN74HC04NS 3BIT D/A
CN101 (3/3)
CN103 (3/3)
CN102 (2/5)
CN104 (2/5)
CN101 (1/3)
CN103 (1/3)
CN101 (2/3)
CN103 (2/3)
DAT
CLK
BCS
IC401 LM3580R-E1 SSB HIGH PUSS FILTER
IC402 MC74HC4053F ANALOG SWITCH
Q403 ΘTA124EK SWITCH
Q402 ΘTA124EK MONO/ST SWITCH
Q401 2SD1781K MUTE
Q322 ΘTC124EK SWITCH
RV402-1
RV403-1
RV403 100k BASS
RV402 100k TREBLE
RV402-2
RV403-2
Q404 2SC2412K TONE AMP
Q406 2SC2412K TONE AMP
Q405 2SD1781K MUTE
Q407 2SD1781K MUTE
WIDE/NAR
IC503 μPC1037GR-E1 MIX
Q506 2SB1197 SWITCH
IC506 LA5003M REG.
Q507 2SC2412K LPF
IC406 MC14094BF MODE SELECT
LAT
DAT
CLK
TC CONT
SYNC/SSB
USB/LSB
ENV/SYNC
QH
IC408 LA5003M REG.
Q701 2SC2412K DC-DC CONVERTER
Q702 2SC2412K DC-DC CONVERTER
T701 DC-DC CONVERTER
IC504 μPC1037GR-E1 MIX
IC505 SN74HC02NS LACH CONTROL
SUB LAT
MAIN LAT
IC407 SN74HC367NS BUFFER
BCS
LAT2
DAT
CLK


22
23
24
25
26
27
28
29
30
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
3V
REG
WIDE/NAR
ENV/SYNC
CLK
SSB/SYNC
METER
SD
USB/LSB
Q307 DTA124EK SSB SWITCH
Q302 DTC124EK ENV SWITCH
Q304 2SA1037K PLL UNLOCK SWITCH
Q305 DTC124EK PLL UNLOCK SWITCH
Q303 DTC144EK SSB SWITCH
X301 3750kHz
L301 (OSC)
RV301 100k
FM SCAN/STOP
D303 DAN202K
IC301
CXA1376S
FM/AM FE
IF AMP, DET
X302 55.390MHz
Q316 2SA1037K SSB SWITCH
Q314 DTC124EK SWITCH
Q315 DTC124EK SSB SWITCH
D305 DAN202K
Q313 2SC2059K 2ND LOCAL BUFFER
D306 DAN202K
Q319 2SC2412K NOISE MUTE
Q321 2SC2412K NOISE MUTE
D304 DAN202K
IC403
LA3335M
MPX
RV401 22k
FM STEREO
D403 DAN202K
Q402 DTA124EK MONO/ST SWITCH
Q401 2SD1781K MUTE
FM ST:2.2
FM MONO:2.9
Q317 2SC2412K HIGH CUT MUTE
Q318 DTC124EK HIGH CUT MUTE
IC409
LM358OR-E1
LINE OUT AMP
IC405
µPC1316C
AF AMP
Q408 2SB1132 AF POWER AMP
Q405 2SD1781K MUTE
Q407 2SD1781K MUTE
RV404 20k
VOLUME
Q411 2SD1781K REG
Q409 2SB1197K POWER SWITCH
Q410 DTC124EK SWITCH
D401 RD6.8M
L701 220µH
L702 27µH
Q702 2SC2412K DC-DC CONVERTER
T701 DC-DC CONVERTER
D702 DAN202K
JACK BOARD (2/2)
CN602
J603 LINE OUT
TAPE
J602 REMOTE
Q601 2SB1197K TC REMOTO SWITCH
Q602 DTC124EK SWITCH
J604
SP101
J705 DC IN 6V
L607
L608
DRY BATTERY SIZE"C" (INC DESIGNATION R14) 4PCS 6V
D402 DAN202K
1 6V (BACKUP)
2 6V TR
3 CLK
4 DAT
5 LAT1
6 LAT2
7 BCS
8 POWER
9 MUTE
10 SD1
11
12 BATTDET
13 BEEP
14 SMETER
15 GND
CN401 15P
A
TO MICRO COMPUTER BOARD

4-6. SIGNAL SECTION PRINTED WIRING BOARDS

- See page 54 for Semiconductor Lead Layouts.
- See page 38 for Note on Printed Wiring Board.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16
A
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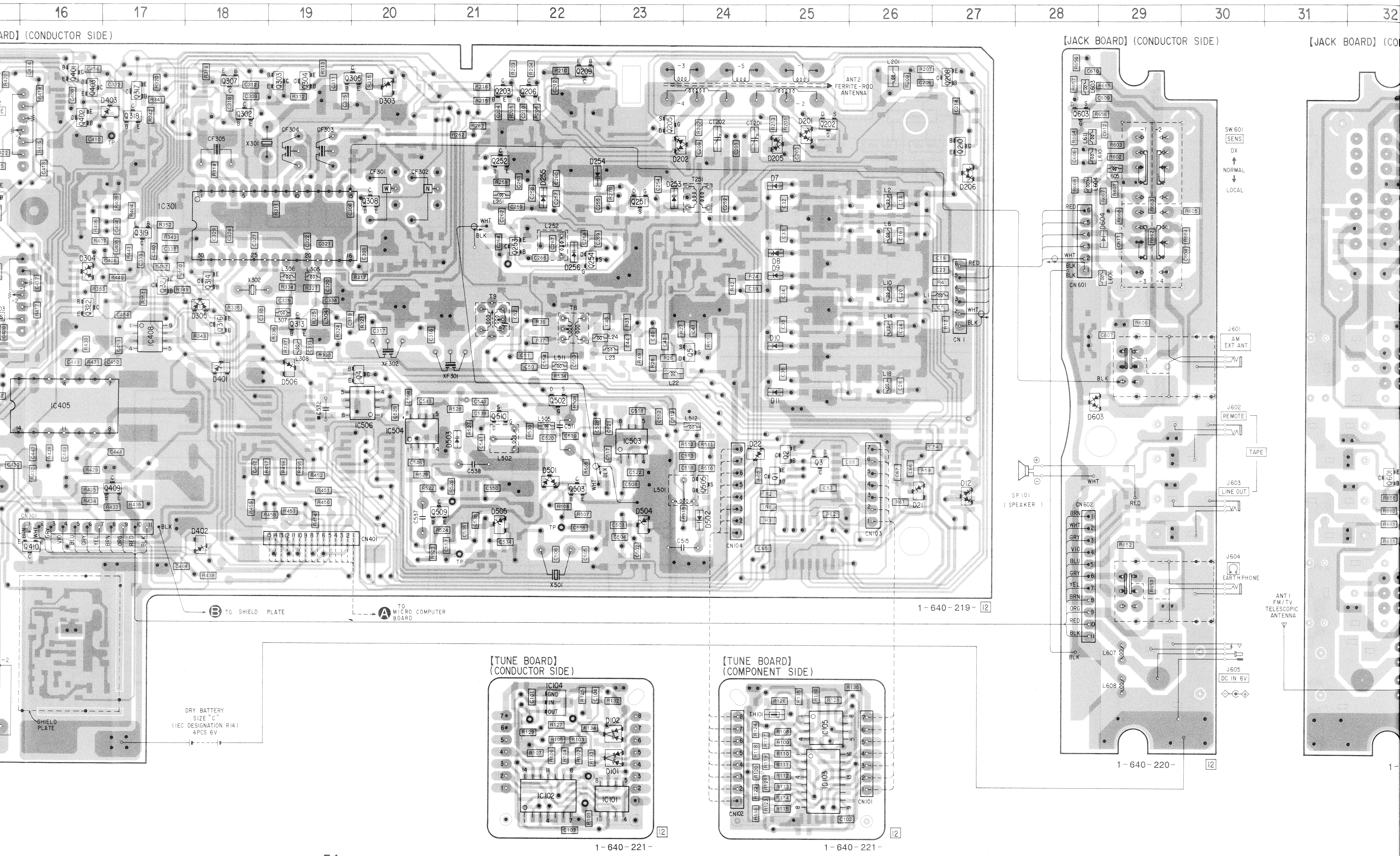
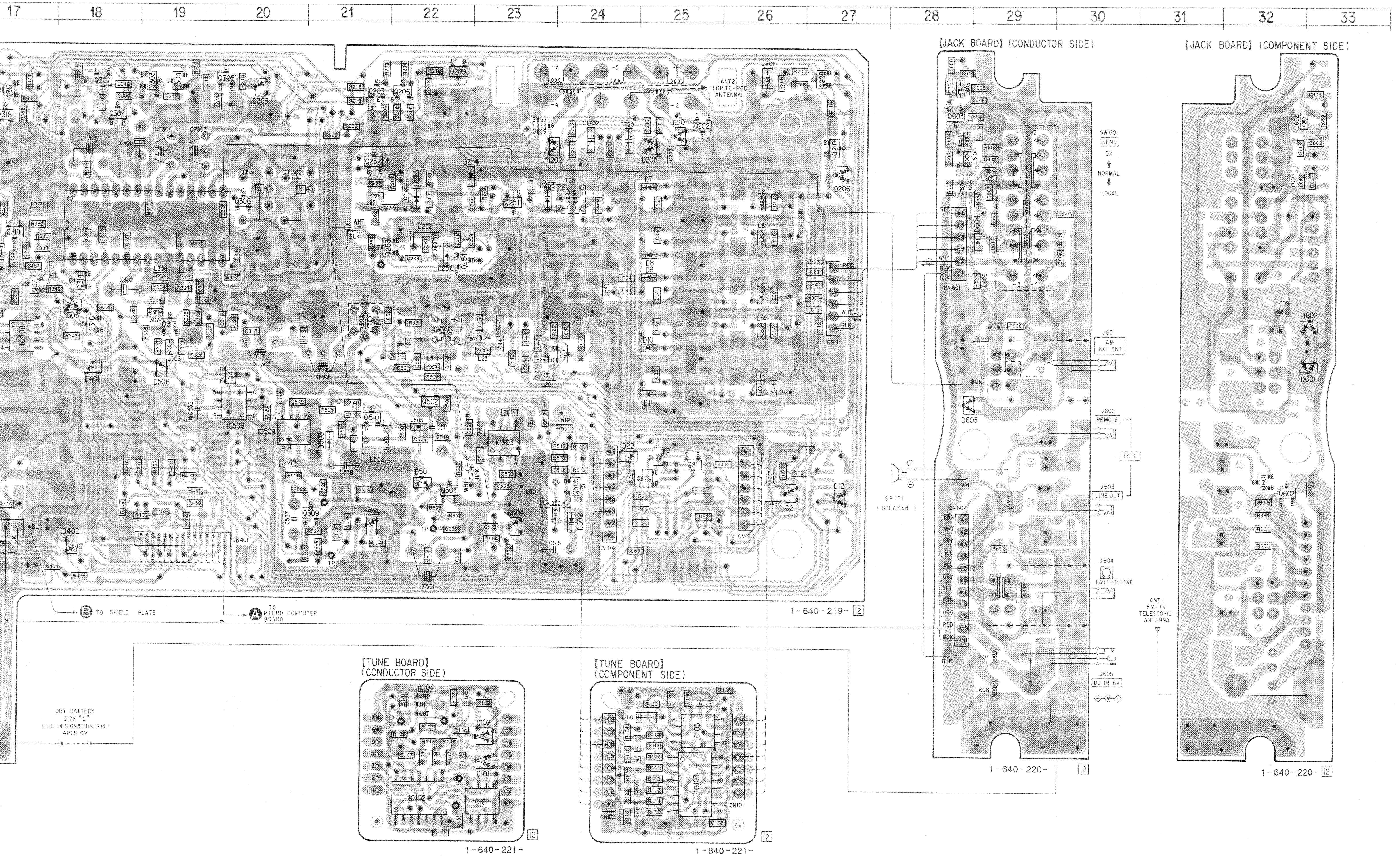
D
E
F
G
H
I
J
【SIGNAL BOARD】(COMPONENT SIDE)
【SIGNAL BOARD】(CONDUCTOR SIDE)
SHIELD PLATE
T701 DC-DC CONVERTER
RV402 TREBLE
RV403 BASS
RV404 VOLUME
RV301
RV401
IC1
IC2
IC3
IC401
IC402
IC403
IC405
IC406
IC407
IC409
IC501
IC502
IC505
CN301
05
1-640-219-12

Semiconductor Location

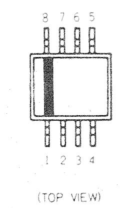
Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D1	C-2	D19	D-4	D304	D-16	D702	I-12	IC409	E-13	Q11	E-9	Q255	A-7	Q319	C-17	Q504	F-4
D2	C-2	D20	D-5	D305	D-18			IC501	F-5	Q12	D-4	Q301	B-7	Q320	A-8	Q505	F-24
D3	D-2	D21	F-26	D306	A-11	IC1	F-1	IC502	F-7	Q13	C-5	Q302	B-18	Q321	D-17	Q506	E-8
D4	D-2	D22	F-24	D401	E-18	IC2	G-3	IC503	F-23	Q14	E-4	Q303	A-19	Q322	D-16	Q507	E-5
D5	E-2	D101	I-23	D402	G-18	IC3	F-3	IC504	E-20	Q15	C-4	Q304	A-19	Q401	A-16	Q508	G-7
D6	B-1	D102	I-23	D403	B-17	IC101	J-23	IC505	F-8	Q201	B-3	Q305	A-20	Q402	B-16	Q509	F-21
D7	B-25	D201	B-25	D410	E-9	IC102	J-22	IC506	E-20	Q202	B-25	Q307	A-18	Q403	A-16	Q510	E-21
D8	C-25	D202	B-23	D501	F-22	IC103	J-25			Q203	A-21	Q308	C-20	Q404	D-15	Q601	F-32
D9	D-25	D204	B-4	D502	G-24	IC104	I-22	Q1	F-25	Q204	B-5	Q309	D-8	Q405	H-15	Q602	F-32
D10	D-25	D205	B-25	D503	F-21	IC105	I-25	Q2	F-25	Q205	B-23	Q310	D-7	Q406	C-15	Q603	B-28
D11	E-25	D206	B-27	D504	G-23	IC301	C-18	Q3	F-25	Q206	A-22	Q311	B-11	Q407	H-15	Q701	H-12
D12	F-27	D253	C-23	D505	G-21	IC401	D-11	Q4	E-20	Q208	A-27	Q312	B-11	Q408	F-11	Q702	H-12
D13	D-5	D254	B-22	D506	E-19	IC402	D-11	Q5	D-24	Q209	A-22	Q313	D-19	Q409	F-17		
D14	D-5	D255	C-22	D601	E-33	IC403	A-12	Q6	E-5	Q210	B-27	Q314	D-18	Q410	G-16		
D15	D-5	D256	C-22	D602	D-33	IC405	E-16	Q7	D-4	Q251	C-23	Q315	D-10	Q411	E-9		
D16	D-5	D301	C-8	D603	E-28	IC406	E-9	Q8	D-6	Q252	B-21	Q316	D-18	Q501	F-6		
D17	E-1	D302	B-8	D604	C-29	IC407	F-9	Q9	D-6	Q253	C-21	Q317	A-17	Q502	E-22		
D18	C-4	D303	A-20	D701	H-12	IC408	D-17	Q10	D-6	Q254	C-22	Q318	B-17	Q503	F-22		


16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
ARD] (CONDUCTOR SIDE)
ANT2 FERRITE-ROD ANTENNA
IC301
IC405
IC408
IC506
IC504
IC503
CN301
CN401
CN104
CN103
CN1
TO SHIELD PLATE
TO MICRO COMPUTER BOARD
SHIELD PLATE
DRY BATTERY SIZE "C" (IEC DESIGNATION R14) 4PCS 6V
1-640-219- 12
【JACK BOARD】(CONDUCTOR SIDE)
SW601 SENS
DX
NORMAL
LOCAL
CN601
J601 AM EXT ANT
J602 REMOTE
TAPE
J603 LINE OUT
J604 EARTHPHONE
J605 DC IN 6V
SP101 (SPEAKER)
CN602
ANT1 FM/TV TELESCOPIC ANTENNA
1-640-220- 12
【JACK BOARD】(CO
【TUNE BOARD】(CONDUCTOR SIDE)
IC104
IC102
IC101
1-640-221-
12
【TUNE BOARD】(COMPONENT SIDE)
IC105
IC103
CN102
CN101
1-640-221-
12

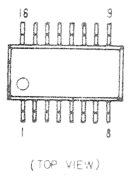

17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
ANT2 FERRITE-ROD ANTENNA
IC301
IC408
IC504
IC503
IC506
CN401
CN104
CN103
CN1
B TO SHIELD PLATE
A TO MICRO COMPUTER BOARD
1-640-219- 12
DRY BATTERY SIZE "C" (IEC DESIGNATION R14) 4PCS 6V
[JACK BOARD] (CONDUCTOR SIDE)
[JACK BOARD] (COMPONENT SIDE)
SW601 SENS
DX
NORMAL
LOCAL
CN601
CN602
J601 AM EXT ANT
J602 REMOTE
TAPE
J603 LINE OUT
J604 EARTHPHONE
J605 DC IN 6V
SP101 (SPEAKER)
ANT1 FM/TV TELESCOPIC ANTENNA
RED
WHT
BLK
BRN
GRY
VIO
BLU
YEL
ORG
1-640-220- 12
1-640-220- 12
[TUNE BOARD] (CONDUCTOR SIDE)
[TUNE BOARD] (COMPONENT SIDE)
IC104
GND
IN
OUT
IC102
IC101
IC105
IC103
TH101
CN102
CN101
1-640-221- 12
1-640-221-

- Semiconductor Lead Layouts

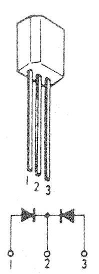
AK93C57F
LM358DR


8 7 6 5
1 2 3 4
(TOP VIEW)

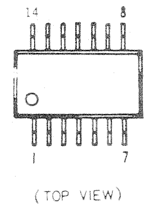
MC14094BF
MC74HC4049F
MC74HC4053F
MC74HC595AF
SN74HC02ANS
SN74HC138ANS
SN74HC367ANS


16 9
1 8
(TOP VIEW)

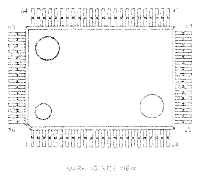
KV1560



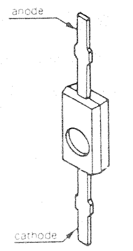
CXD1118M
SN74HC00ANS
SN74HC04ANS
X24C16S-C7000


14 8
1 7
(TOP VIEW)

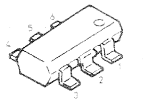
M37450M8-456FP
M50933-124FP



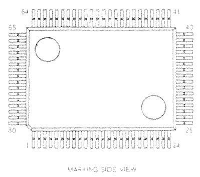
1SS279


anode
cathode

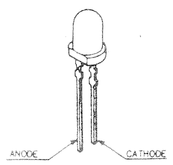
IMN10



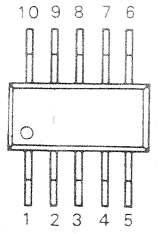
NJU6417BF



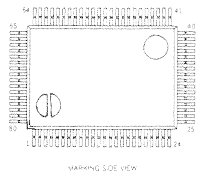
SLP-389F-51-AB


ANODE
CATHODE

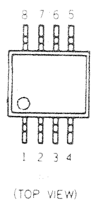
LA3335M


10 9 8 7 6
1 2 3 4 5

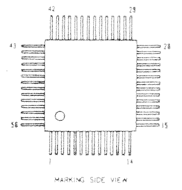
SED1210F1G



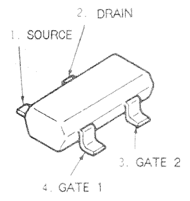
LA5003M
RF5RD301A
RF5RD501AC
TLC27L2CPS
μPC1037GR


8 7 6 5
1 2 3 4
(TOP VIEW)

μPD7225GB-3B7

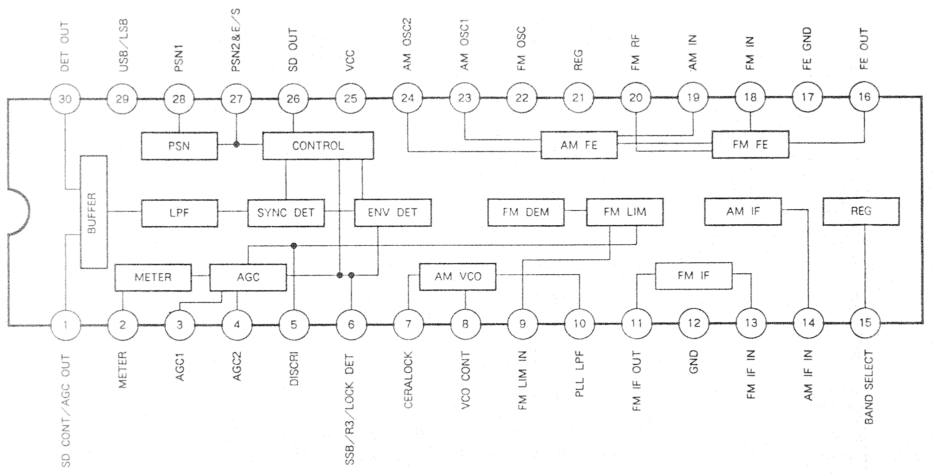


2SK132A-U36

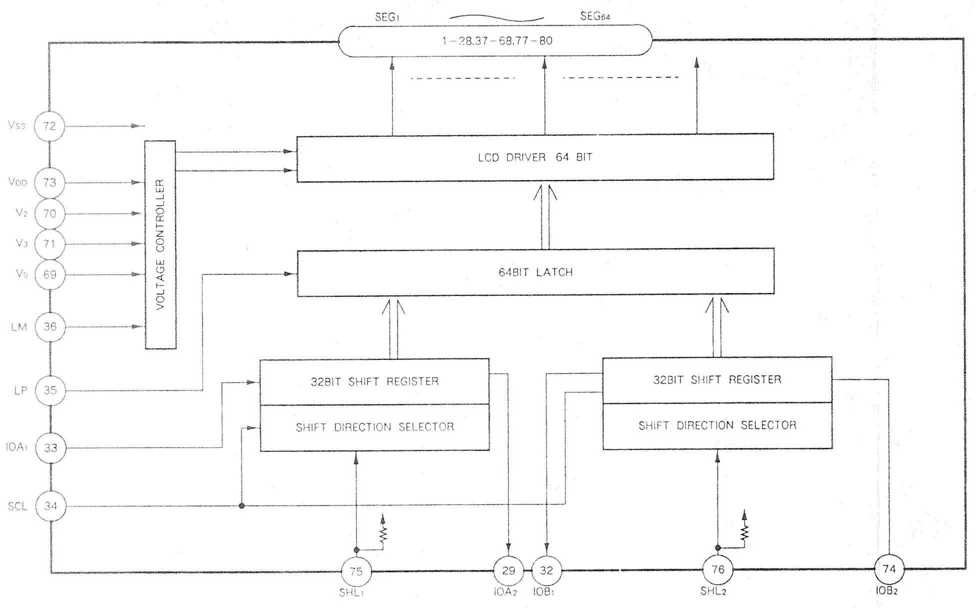

2. DRAIN
1. SOURCE
3. GATE 2
4. GATE 1

- IC Block Diagrams

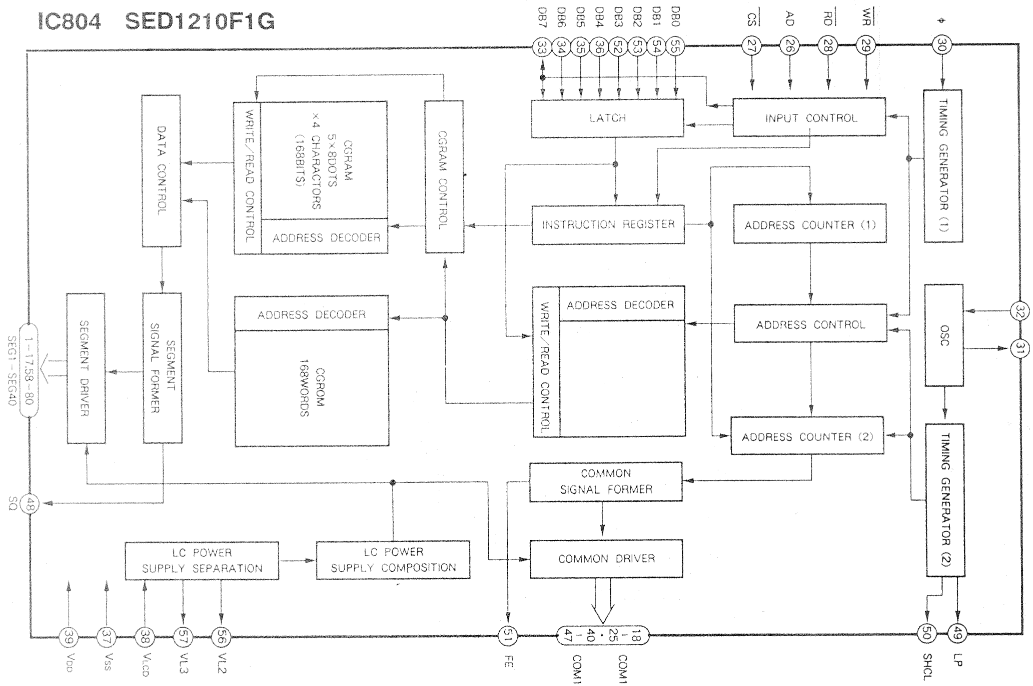
IC301 CXA1376S


DET OUT
USB/LSB
PSN1
PSN2&E/S
SD OUT
VCC
AM OSC2
AM OSC1
FM OSC
REG
AM RF
AM IN
FM IN
FE GND
FE OUT
BUFFER
PSN
CONTROL
AM FE
FM FE
LPF
SYNC DET
ENV DET
FM DEM
FM LIM
AM IF
REG
METER
AGC
AM VCO
FM IF
SD CONT/AGC OUT
METER
AGC1
AGC2
DISCRI
SSB/R3/LOCK DET
CERALOCK
VCO CONT
FM LIM IN
PLL LPF
FM IF OUT
GND
FM IF IN
AM IF IN
BAND SELECT

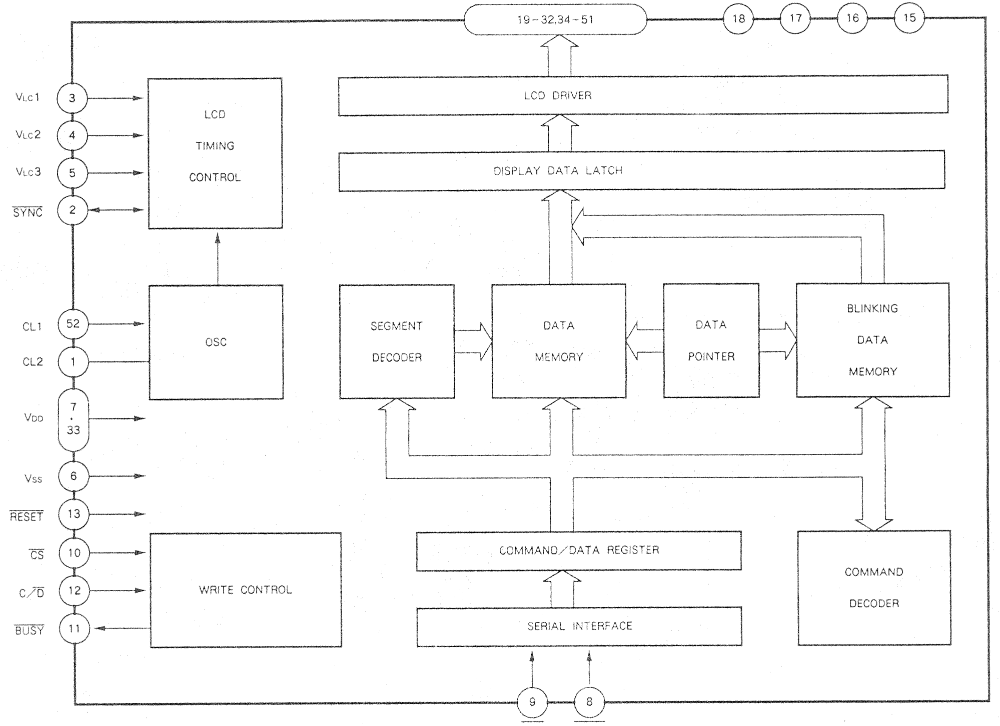
IC803 NJU6417BF


SEG1
SEG64
1–28,37–68,77–80
Vss 72
VDD 73
V2 70
V3 71
V5 69
LM 36
LP 35
IOA1 33
SCL 34
VOLTAGE CONTROLLER
LCD DRIVER 64 BIT
64BIT LATCH
32BIT SHIFT REGISTER
SHIFT DIRECTION SELECTOR
75 SHL1
29 IOA2
32 IOB1
76 SHL2
74 IOB2

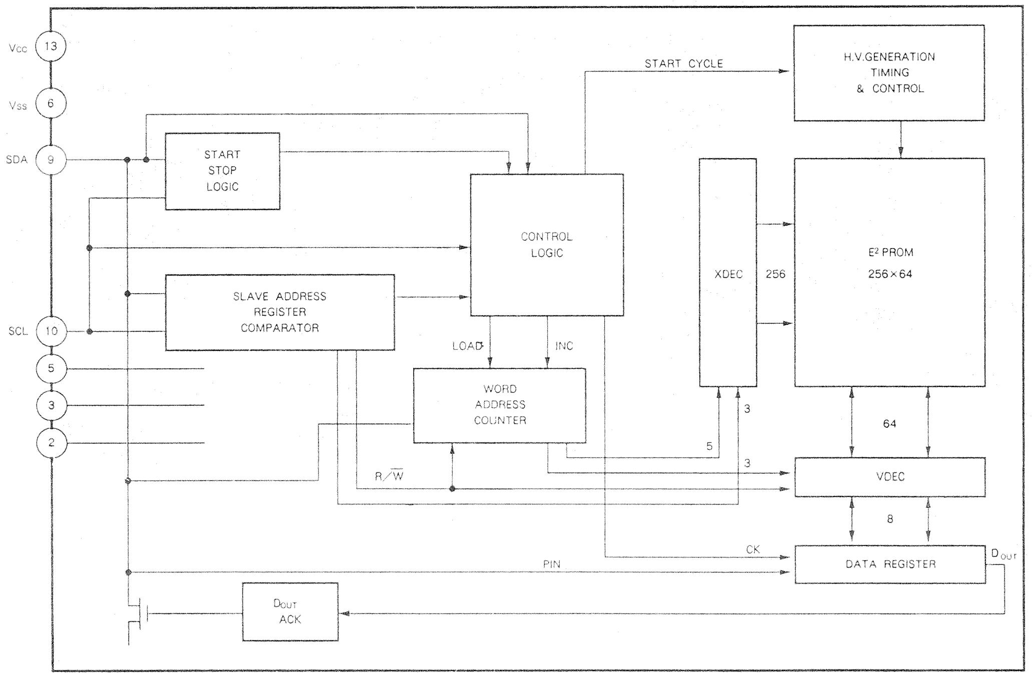
IC804 SED1210F1G


DB7 DB6 DB5 DB4 DB3 DB2 DB1 DB0
CS
A0
RD
WR
DATA CONTROL
WRITE/READ CONTROL
CGRAM 5×8DOTS ×4 CHARACTERS (168BITS)
ADDRESS DECODER
CGRAM CONTROL
LATCH
INPUT CONTROL
TIMING GENERATOR (1)
INSTRUCTION REGISTER
ADDRESS COUNTER (1)
ADDRESS DECODER
CGROM 168WORDS
ADDRESS CONTROL
OSC
OSC1
OSC2
SEG1–SEG40
SEGMENT DRIVER
SEGMENT SIGNAL FORMER
ADDRESS COUNTER (2)
TIMING GENERATOR (2)
COMMON SIGNAL FORMER
COMMON DRIVER
SC
LC POWER SUPPLY SEPARATION
LC POWER SUPPLY COMPOSITION
VDD
Vss
VLC0
VL3
VL2
FE
COM16
COM1
SHCL
LP

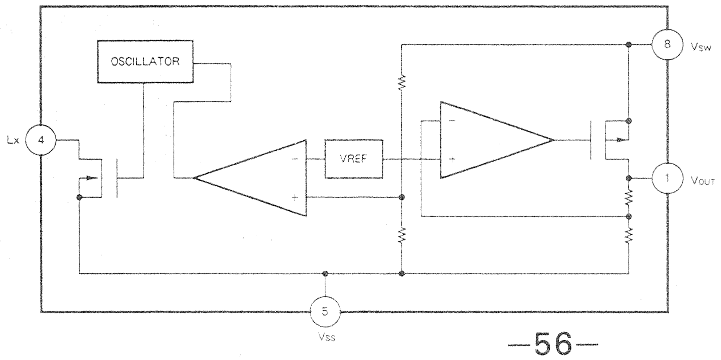
IC805 μPD7225GB-3B7

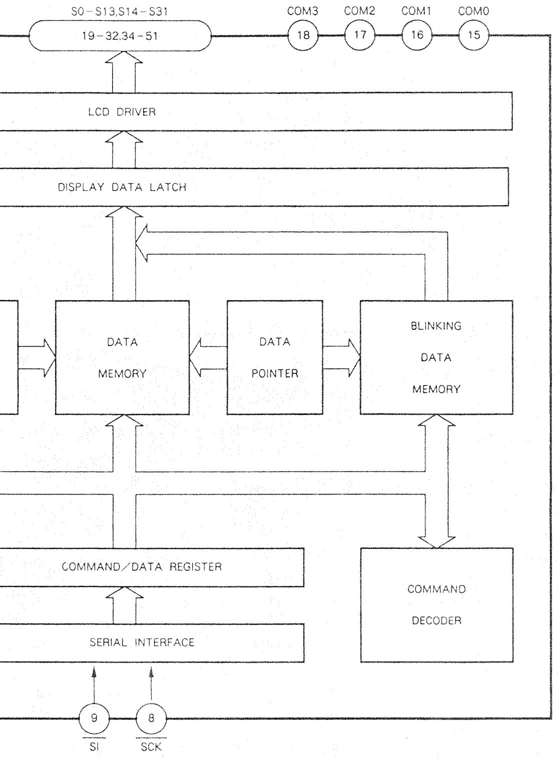

S0–S13,S14–S31
19–32,34–51
COM3 18
COM2 17
COM1 16
COM0 15
VLC1 3
VLC2 4
VLC3 5
SYNC 2
LCD TIMING CONTROL
LCD DRIVER
DISPLAY DATA LATCH
CL1 52
CL2 1
OSC
SEGMENT DECODER
DATA MEMORY
DATA POINTER
BLINKING DATA MEMORY
VDD 7, 33
Vss 6
RESET 13
CS 10
C/D 12
BUSY 11
WRITE CONTROL
COMMAND/DATA REGISTER
SERIAL INTERFACE
COMMAND DECODER
9 SI
8 SCK

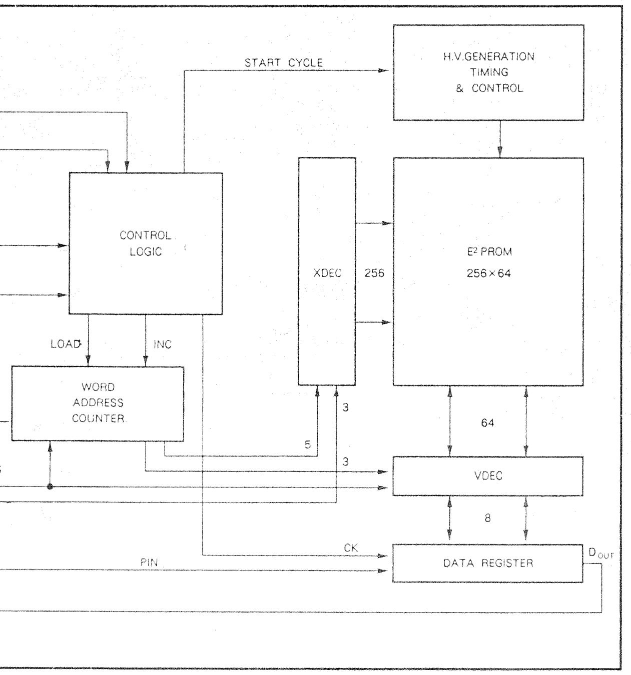
IC806 X24C16S-C7000


Vcc 13
Vss 6
SDA 9
SCL 10
5
3
2
START CYCLE
H.V.GENERATION TIMING & CONTROL
START STOP LOGIC
CONTROL LOGIC
XDEC
256
E² PROM 256×64
SLAVE ADDRESS REGISTER COMPARATOR
LOAD
INC
WORD ADDRESS COUNTER
R/W
64
VDEC
8
PIN
CK
DATA REGISTER
DOUT
DOUT ACK

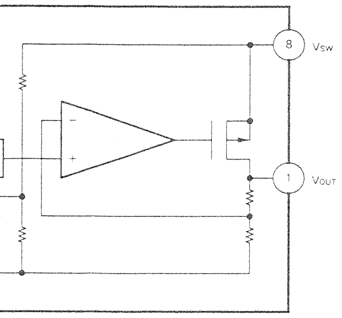
IC812 RF5RD501AC IC817 RF5RD301A


OSCILLATOR
8 Vsw
Lx 4
VREF
1 Vout
5 Vss


S0~S13,S14~S31
19~32,34~51
COM3
COM2
COM1
COM0
18
17
16
15
LCD DRIVER
DISPLAY DATA LATCH
DATA MEMORY
DATA POINTER
BLINKING DATA MEMORY
COMMAND/DATA REGISTER
COMMAND DECODER
SERIAL INTERFACE
9
8
SI
SCK


START CYCLE
H.V.GENERATION TIMING & CONTROL
CONTROL LOGIC
XDEC
256
E² PROM 256×64
LOAD
INC
WORD ADDRESS COUNTER
5
3
3
64
VDEC
8
CK
PIN
DATA REGISTER
D_OUT

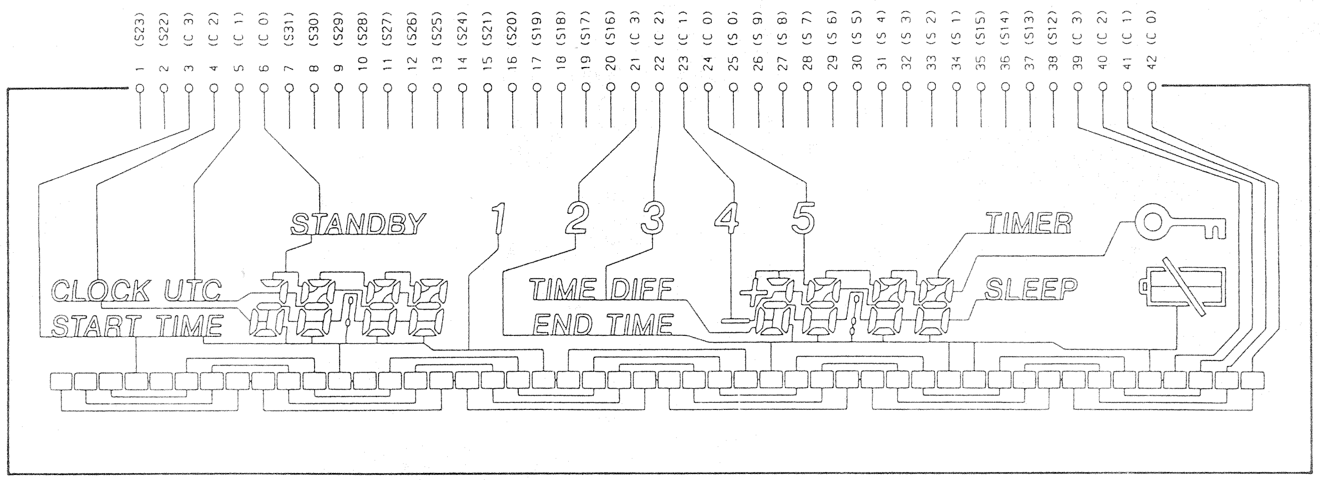
RF5RD301A



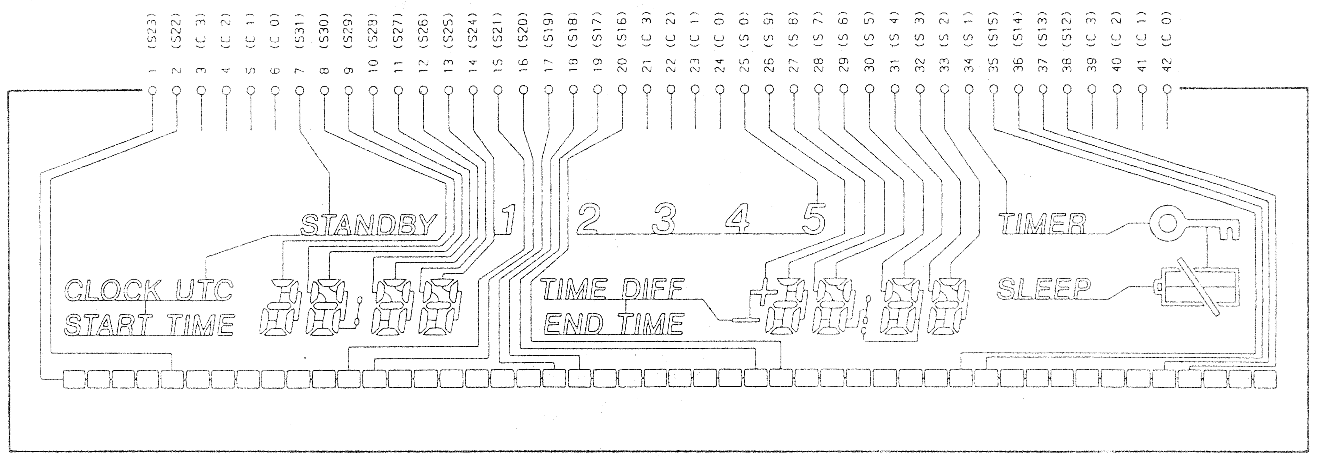
● LCD Internal Connection

LCD801

COMMON

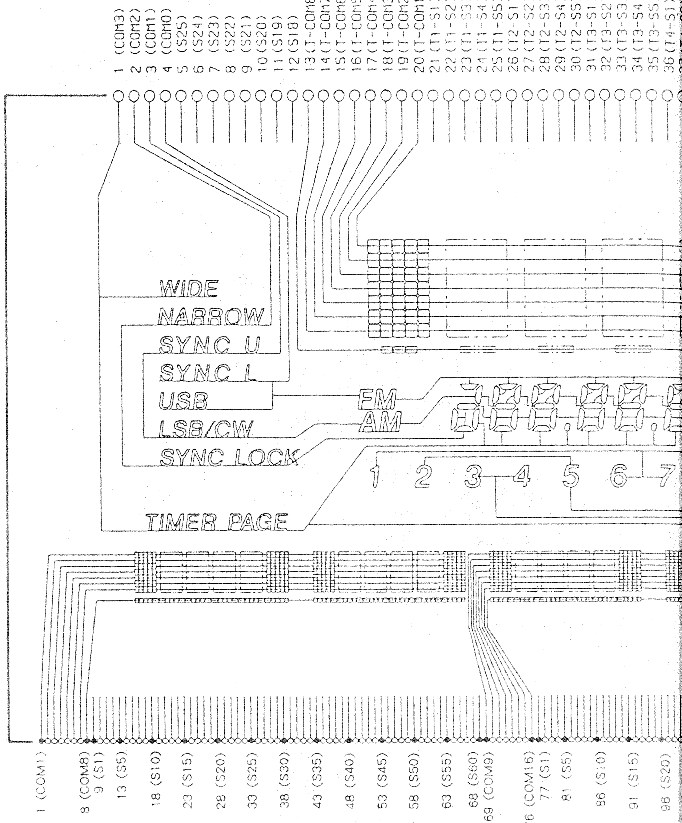

1 (S23)
2 (S22)
3 (C 3)
4 (C 2)
5 (C 1)
6 (C 0)
7 (S31)
8 (S30)
9 (S29)
10 (S28)
11 (S27)
12 (S26)
13 (S25)
14 (S24)
15 (S21)
16 (S20)
17 (S19)
18 (S18)
19 (S17)
20 (S16)
21 (C 3)
22 (C 2)
23 (C 1)
24 (C 0)
25 (S 0)
26 (S 9)
27 (S 8)
28 (S 7)
29 (S 6)
30 (S 5)
31 (S 4)
32 (S 3)
33 (S 2)
34 (S 1)
35 (S15)
36 (S14)
37 (S13)
38 (S12)
39 (C 3)
40 (C 2)
41 (C 1)
42 (C 0)
STANDBY
1
2
3
4
5
TIMER
CLOCK UTC
START TIME
TIME DIFF
END TIME
SLEEP

SEGMENT

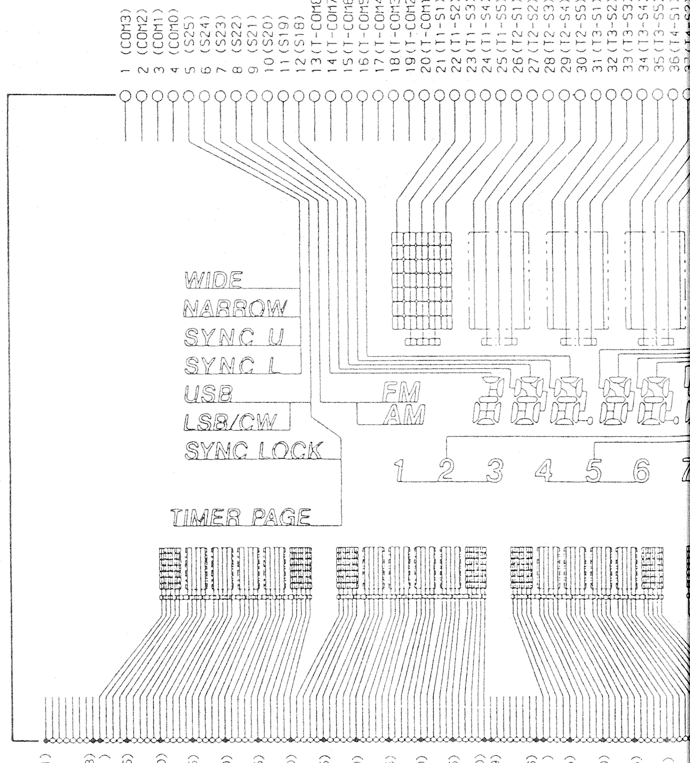

1 (S23)
2 (S22)
3 (C 3)
4 (C 2)
5 (C 1)
6 (C 0)
7 (S31)
8 (S30)
9 (S29)
10 (S28)
11 (S27)
12 (S26)
13 (S25)
14 (S24)
15 (S21)
16 (S20)
17 (S19)
18 (S18)
19 (S17)
20 (S16)
21 (C 3)
22 (C 2)
23 (C 1)
24 (C 0)
25 (S 0)
26 (S 9)
27 (S 8)
28 (S 7)
29 (S 6)
30 (S 5)
31 (S 4)
32 (S 3)
33 (S 2)
34 (S 1)
35 (S15)
36 (S14)
37 (S13)
38 (S12)
39 (C 3)
40 (C 2)
41 (C 1)
42 (C 0)
STANDBY
1
2
3
4
5
TIMER
CLOCK UTC
START TIME
TIME DIFF
END TIME
SLEEP

LCD802

COMMON


1 (COM3)
2 (COM2)
3 (COM1)
4 (COM0)
5 (S25)
6 (S24)
7 (S23)
8 (S22)
9 (S21)
10 (S20)
11 (S19)
12 (S18)
13 (T-COM8)
14 (T-COM7)
15 (T-COM6)
16 (T-COM5)
17 (T-COM4)
18 (T-COM3)
19 (T-COM2)
20 (T-COM1)
21 (T1-S1)
22 (T1-S2)
23 (T1-S3)
24 (T1-S4)
25 (T1-S5)
26 (T2-S1)
27 (T2-S2)
28 (T2-S3)
29 (T2-S4)
30 (T2-S5)
31 (T3-S1)
32 (T3-S2)
33 (T3-S3)
34 (T3-S4)
35 (T3-S5)
WIDE
NARROW
SYNC U
SYNC L
USB
LSB/CW
SYNC LOCK
FM
AM
1
2
3
4
5
6
7
TIMER PAGE
1 (COM1)
8 (COM8)
9 (S1)
13 (S5)
18 (S10)
23 (S15)
28 (S20)
33 (S25)
38 (S30)
43 (S35)
48 (S40)
53 (S45)
58 (S50)
63 (S55)
68 (S60)
69 (COM9)
76 (COM16)
77 (S1)
81 (S5)
86 (S10)
91 (S15)
96 (S20)

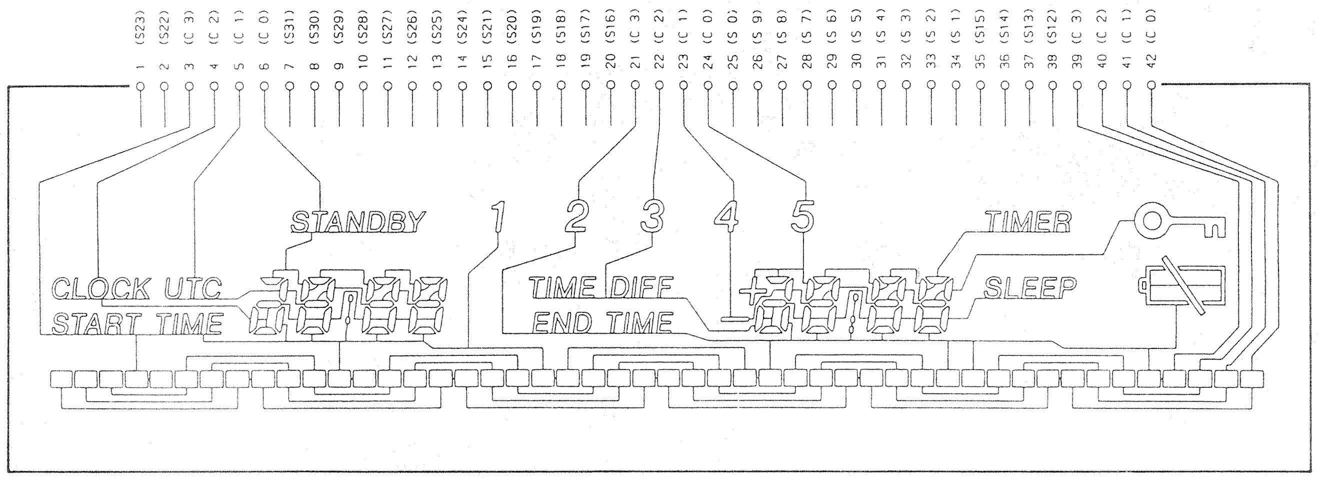
SEGMENT


1 (COM3)
2 (COM2)
3 (COM1)
4 (COM0)
5 (S25)
6 (S24)
7 (S23)
8 (S22)
9 (S21)
10 (S20)
11 (S19)
12 (S18)
13 (T-COM8)
14 (T-COM7)
15 (T-COM6)
16 (T-COM5)
17 (T-COM4)
18 (T-COM3)
19 (T-COM2)
20 (T-COM1)
21 (T1-S1)
22 (T1-S2)
23 (T1-S3)
24 (T1-S4)
25 (T1-S5)
26 (T2-S1)
27 (T2-S2)
28 (T2-S3)
29 (T2-S4)
30 (T2-S5)
31 (T3-S1)
32 (T3-S2)
33 (T3-S3)
34 (T3-S4)
35 (T3-S5)
WIDE
NARROW
SYNC U
SYNC L
USB
LSB/CW
SYNC LOCK
FM
AM
1
2
3
4
5
6
TIMER PAGE
1 (COM1)
8 (COM8)
9 (S1)
13 (S5)
18 (S10)
23 (S15)
28 (S20)
33 (S25)
38 (S30)
43 (S35)
48 (S40)
53 (S45)
58 (S50)
63 (S55)
68 (S60)
69 (COM9)
76 (COM16)
77 (S1)
81 (S5)
86 (S10)
91 (S15)
96 (S20)

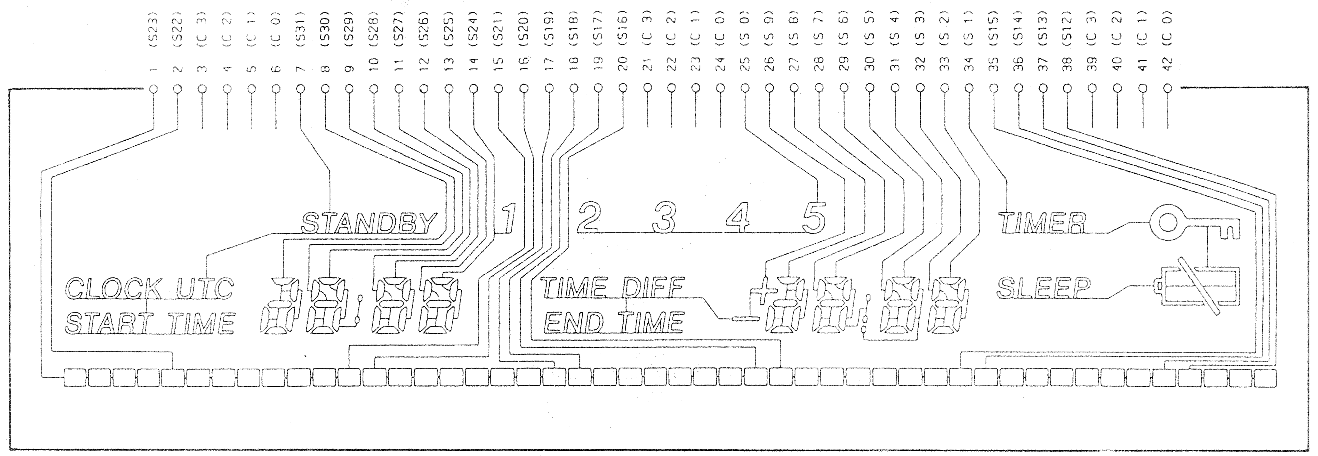
• LCD Internal Connection

LCD801

COMMON


1 (S23)
2 (S22)
3 (C 3)
4 (C 2)
5 (C 1)
6 (C 0)
7 (S31)
8 (S30)
9 (S29)
10 (S28)
11 (S27)
12 (S26)
13 (S25)
14 (S24)
15 (S21)
16 (S20)
17 (S19)
18 (S18)
19 (S17)
20 (S16)
21 (C 3)
22 (C 2)
23 (C 1)
24 (C 0)
25 (S 0)
26 (S 9)
27 (S 8)
28 (S 7)
29 (S 6)
30 (S 5)
31 (S 4)
32 (S 3)
33 (S 2)
34 (S 1)
35 (S15)
36 (S14)
37 (S13)
38 (S12)
39 (C 3)
40 (C 2)
41 (C 1)
42 (C 0)
STANDBY
1
2
3
4
5
TIMER
CLOCK UTC
START TIME
TIME DIFF
END TIME
SLEEP

SEGMENT


1 (S23)
2 (S22)
3 (C 3)
4 (C 2)
5 (C 1)
6 (C 0)
7 (S31)
8 (S30)
9 (S29)
10 (S28)
11 (S27)
12 (S26)
13 (S25)
14 (S24)
15 (S21)
16 (S20)
17 (S19)
18 (S18)
19 (S17)
20 (S16)
21 (C 3)
22 (C 2)
23 (C 1)
24 (C 0)
25 (S 0)
26 (S 9)
27 (S 8)
28 (S 7)
29 (S 6)
30 (S 5)
31 (S 4)
32 (S 3)
33 (S 2)
34 (S 1)
35 (S15)
36 (S14)
37 (S13)
38 (S12)
39 (C 3)
40 (C 2)
41 (C 1)
42 (C 0)
STANDBY
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3
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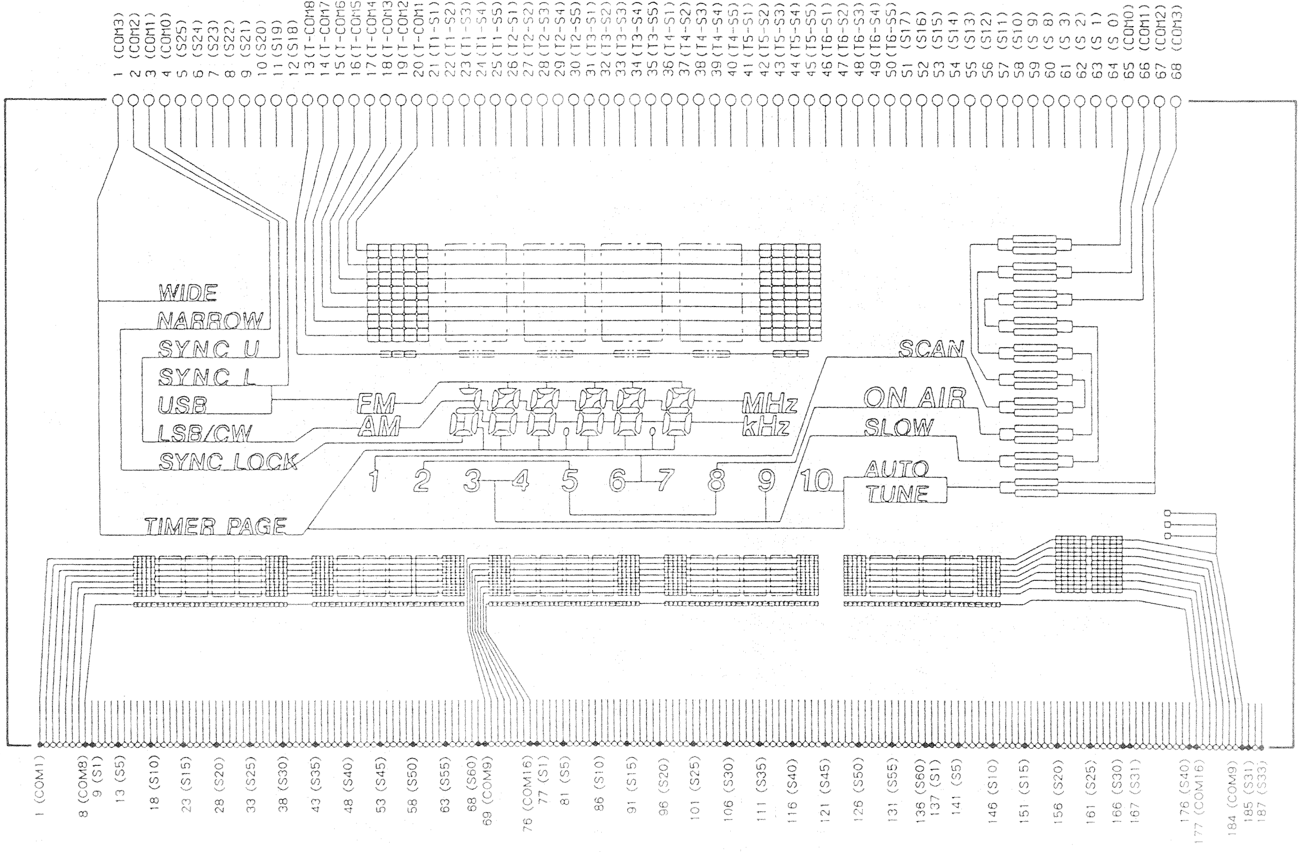
5
TIMER
CLOCK UTC
START TIME
TIME DIFF
END TIME
SLEEP

LCD802

COMMON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63 (S 1)
64 (S 0)
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66 (COM1)
67 (COM2)
68 (COM3)
WIDE
NARROW
SYNC U
SYNC L
USB
LSB/CW
SYNC LOCK
TIMER PAGE
FM
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MHz
kHz
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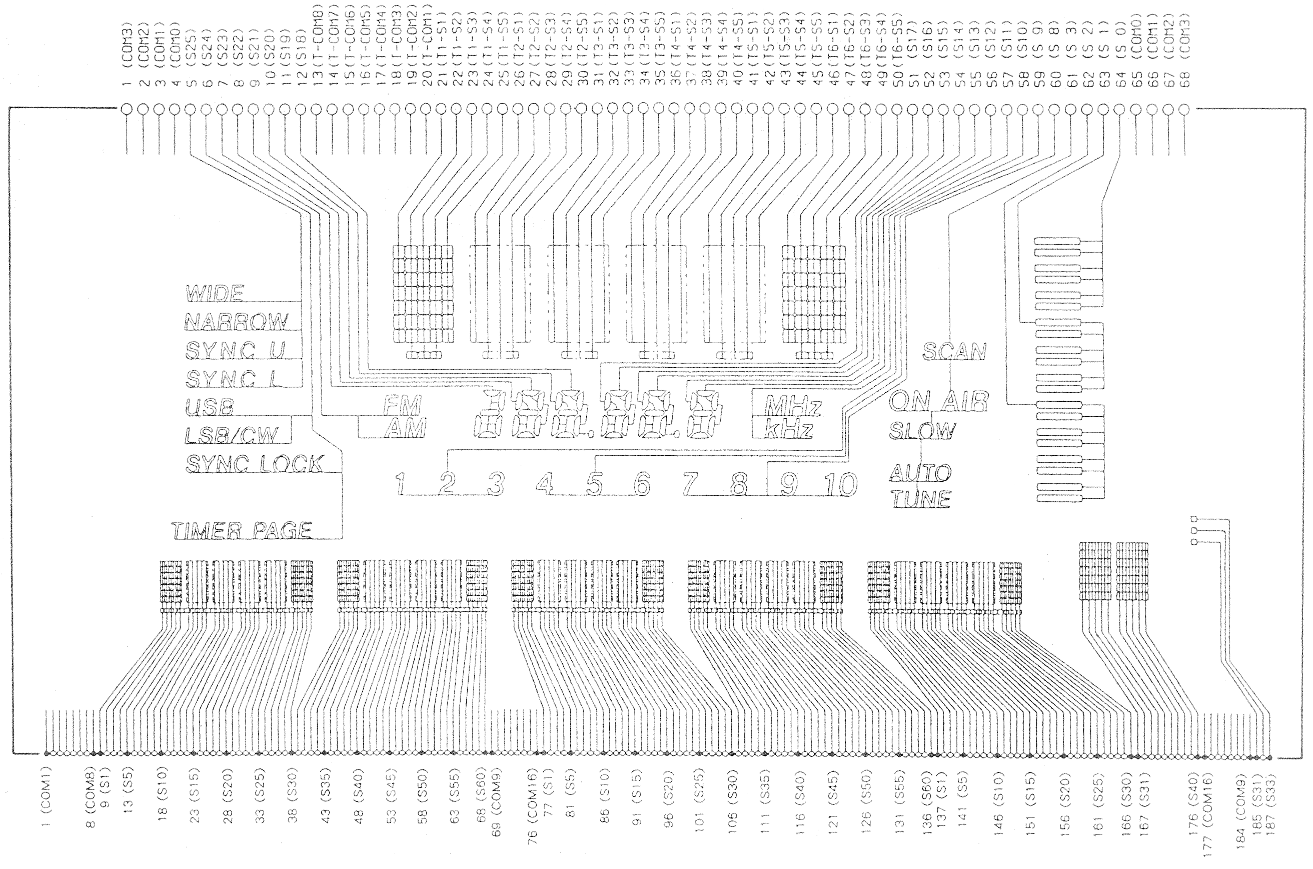
187 (S33)

SEGMENT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65 (COM0)
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67 (COM2)
68 (COM3)
WIDE
NARROW
SYNC U
SYNC L
USB
LSB/CW
SYNC LOCK
TIMER PAGE
FM
AM
MHz
kHz
SCAN
ON AIR
SLOW
AUTO
TUNE
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69 (COM9)
76 (COM16)
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81 (S5)
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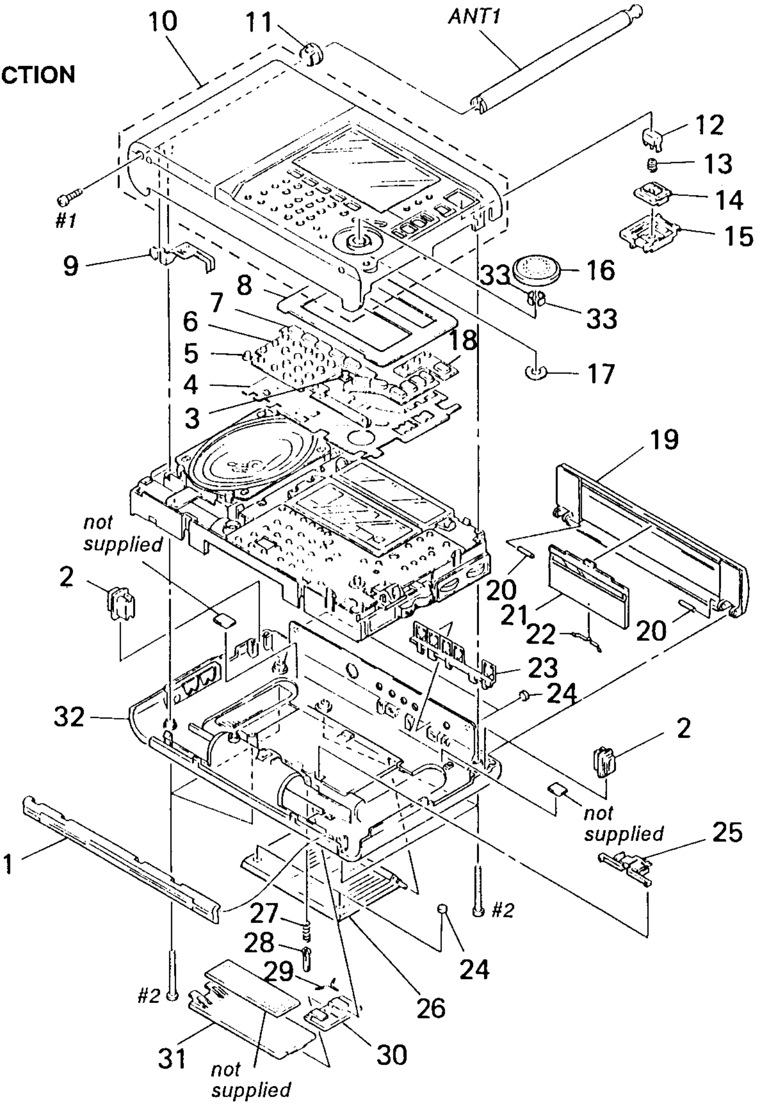
126 (S50)
131 (S55)
136 (S60)
137 (S1)
141 (S5)
146 (S10)
151 (S15)
156 (S20)
161 (S25)
166 (S30)
167 (S31)
176 (S40)
177 (COM16)
184 (COM9)
185 (S31)
187 (S33)

SECTION 5
EXPLODED VIEWS

NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.
- EA: Saudi Arabia
  IT: Italian
  AE: AEP
  AU: Australian
  FR: French
  AE4: Germany

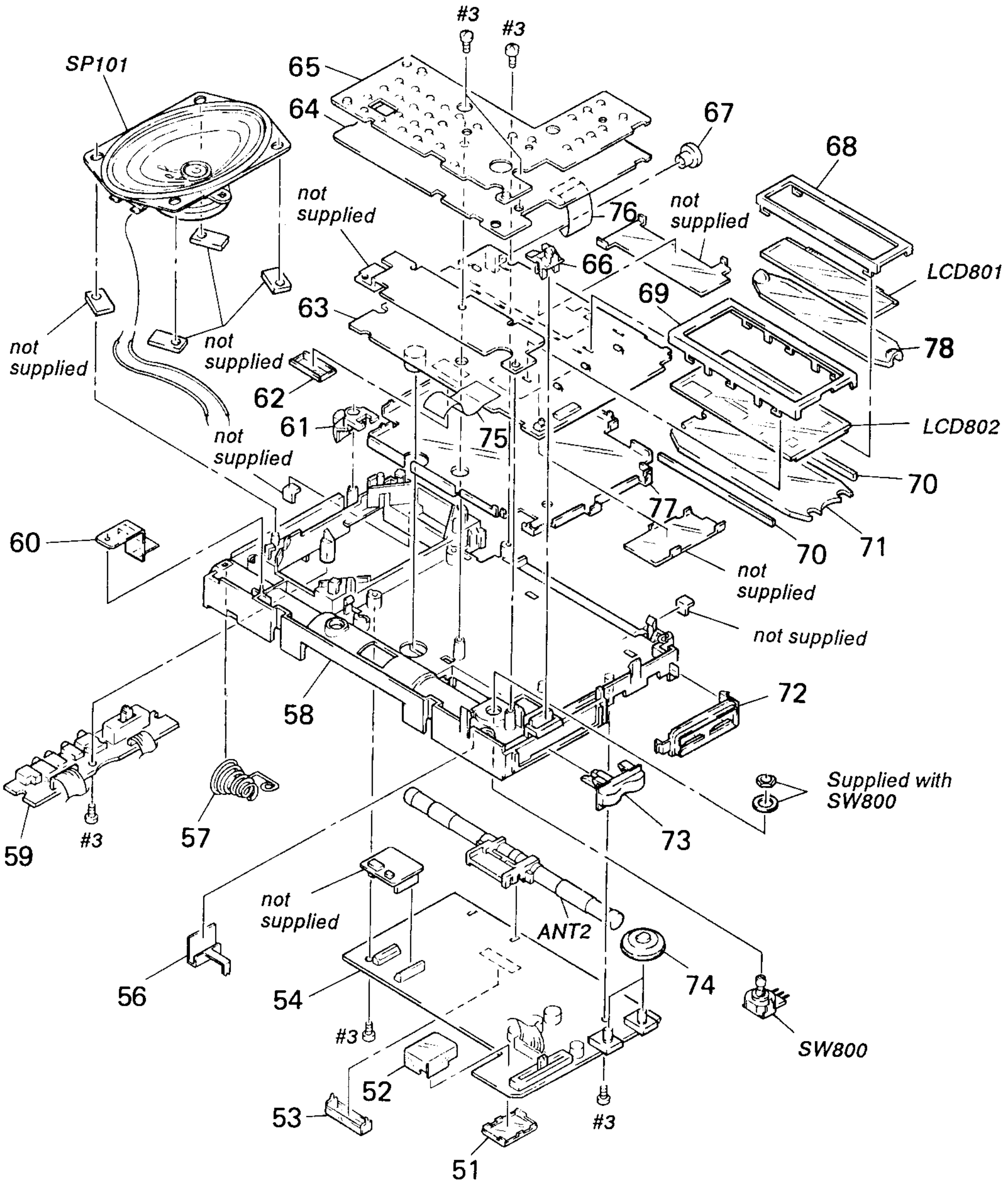
(1) CABINET SECTION



Ref. No.	Part No.	Description	Remark
1	3-368-602-01	FOOT, RUBBER	
2	3-368-587-01	CATCHER (BELT)	
3	3-368-577-01	BUTTON (EDIT)	
4	3-368-621-01	RETAINER, BUTTON	
5	3-368-576-01	BUTTON (LAMP)	
6	3-368-619-01	BUTTON (C)	
7	3-368-618-01	BUTTON (B)	
8	3-368-574-01	PLATE, BACK	
9	* 3-368-607-01	PLATE (B), CONTACT, ANTENNA	
10	X-3363-650-1	CABINET (FRONT) ASSY (3EA)	
10	X-3363-036-1	CABINET (FRONT) ASSY (EXCEPT 3EA)	
11	3-368-578-01	RING (A), ORNAMENTAL	
12	3-368-614-01	BUTTON (POWER)	
13	3-893-862-01	SPRING, COMPRESSION	
14	3-368-615-01	KNOB (POWER)	
15	3-368-616-01	RETAINER (POWER)	
16	X-3363-037-1	KNOB (R E) ASSY	
17	3-368-622-01	WASHER, SLIT	
18	3-368-617-01	BUTTON (A)	

Ref. No.	Part No.	Description	Remark
19	* X-3363-035-1	LID ASSY, UPPER (2AE2, 2AE4)	
19	* X-3363-649-1	LID ASSY, UPPER (4IT, 3EA)	
19	X-3363-393-1	LID ASSY, UPPER (US, CA, 1AE1, 1AE2, 1UK, 1E2, 1E4, 1AU, 1FR)	
20	3-368-620-01	PIN (UPPER LID)	
21	X-3363-034-1	CURSOR ASSY	
22	3-368-605-01	SPRING (CURSOE), LEAF	
23	3-368-584-01	BUTTON (TIMER SET)	
24	3-368-590-01	CUSHION (A)	
25	3-368-612-01	SLIDER (STAND LOCK)	
26	3-368-600-01	STAND	
27	3-372-283-01	SPRING, COMPRESSION	
28	3-368-586-01	PIN, LIFT	
29	3-368-593-01	SPRING (BATTERY)	
30	3-368-597-01	KNOB (BATTERY)	
31	3-368-596-01	LID, BATTERY CASE	
32	3-368-628-01	LID, REAR, CABINET	
33	3-371-909-01	CUSHION (R, E)	
ANT1	1-501-505-11	ANTENNA, TELESCOPIC	

(2) CHASSIS SECTION


#3
#3
SP101
65
64
67
68
not supplied
76
not supplied
66
LCD801
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69
78
not supplied
not supplied
62
61
75
LCD802
not supplied
70
77
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70
71
not supplied
not supplied
72
58
Supplied with SW800
59
#3
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73
not supplied
ANT2
56
54
74
#3
SW800
52
53
#3
51

Ref. No.	Part No.	Description	Remark
51	* 3-368-626-01	CASE (D), SHIELD	
52	* 3-368-625-01	CASE (C), SHIELD	
53	* 3-368-624-01	CASE (B), SHIELD	
54	* A-3679-241-A	SIGNAL BOARD, COMPLETE (EXCEPT 1UK)	
54	* A-3679-283-A	SIGNAL BOARD, COMPLETE (1UK)	
56	3-368-589-01	TERMINAL, BATTERY	
57	3-368-588-01	SPRING, BATTERY COIL	
58	* 3-368-627-01	CHASSIS	
59	* A-3679-244-A	JACK BOARD, COMPLETE (EXCEPT 1UK)	
59	* A-3679-286-A	JACK BOARD, COMPLETE (1UK)	
60	* 3-368-606-01	PLATE (A), CONTACT, ANTENNA	
61	3-368-603-01	KNOB (ATT)	
62	* 3-368-592-01	CASE (A), SHIELD	
63	* A-3679-243-A	MICROCOMPUTER BOARD, COMPLETE (EXCEPT 1UK)	
63	* A-3679-285-A	MICROCOMPUTER BOARD, COMPLETE (1UK)	
64	* 1-640-222-11	KEY BOARD	
66	3-368-604-01	KNOB (S/F)	
67	3-368-581-01	KNOB (LCD)	
68	* 3-368-570-01	HOLDER (LCD801)	
69	* 3-368-571-01	HOLDER (LCD802)	
70	* 1-535-903-11	CONDUCTIVE BOARD, CONNECTION	
71	* 3-368-573-01	CHIP (B), LIGHT GUIDE	
72	3-368-583-01	COVER (TONE)	
73	3-368-601-01	KNOB (VOL)	
74	3-368-582-01	KNOB (TONE)	
75	1-640-354-11	SIGNAL FLEXIBLE BOARD	
76	* 1-640-353-11	KEY FLEXIBLE BOARD	
77	* 3-368-591-01	PLATE (LCD), SHIELD	
78	* 3-368-572-01	CHIP (A), LIGHT GUIDE	
ANT2	1-402-557-11	ANTENNA, FERRITE-ROD	
SP101	1-544-498-11	SPEAKER	
SW800	1-466-537-11	ENCODER, ROTARY	
LCD801	1-809-368-11	DISPLAY PANEL, LIQUID CRYSTAL	
LCD802	1-809-367-11	DISPLAY PANEL, LIQUID CRYSTAL	

SECTION 6
ELECTRICAL PARTS LIST

JACK

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA...: μA..., uPA...: μPA...,
  uPB...: μPB..., uPC...: μPC...,
  uPD...: μPD...
- CAPACITORS
  uF: μF
- COILS
  uH: μH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le neméro spécifié.

When including parts by reference number, please include the board name.

Ref. No.	Part No.	Description	Remark
	* A-3679-244-A	JACK BOARD, COMPLETE (EXCEPT 1UK)	
	* A-3679-286-A	JACK BOARD, COMPLETE (1UK)	
		********************************	
		< CAPACITOR >	
C601	1-163-113-00	CERAMIC CHIP 68PF 5% 50V	
C602	1-163-125-00	CERAMIC CHIP 220PF 5% 50V	
C603	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C604	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C605	1-163-091-00	CERAMIC CHIP 8PF 50V	
C606	1-163-087-00	CERAMIC CHIP 4PF 50V	
C607	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C608	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C609	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C610	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C611	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C612	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
		< CONNECTOR >	
CN601	* 1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P	
CN602	* 1-564-713-11	PIN, CONNECTOR (SMALL TYPE) 11P	
		< DIODE >	
D601	8-719-800-76	DIODE 1SS226	
D602	8-719-800-76	DIODE 1SS226	
D603	8-719-800-76	DIODE 1SS226	
D604	8-719-123-79	DIODE 1SS279	
		< JACK >	
J601	1-573-178-11	JACK (AM EXT ANT)	
J602	1-563-280-21	JACK (TAPE REMOTE)	
J603	1-563-280-21	JACK (TAPE LINE OUT)	
J604	1-573-177-11	JACK (EARPHONES)	
J705	1-573-180-11	JACK, DC (DC IN 6V)	

Ref. No.	Part No.	Description	Remark
		< COIL >	
L601	1-410-987-11	INDUCTOR CHIP 0.33uH	
L602	1-410-393-11	INDUCTOR CHIP 100uH	
L603	1-412-011-31	INDUCTOR CHIP 27uH	
L604	1-410-997-31	INDUCTOR CHIP 2.2uH	
L605	1-410-997-31	INDUCTOR CHIP 2.2uH	
L606	1-410-997-31	INDUCTOR CHIP 2.2uH	
L607	1-407-882-00	COIL	
L608	1-407-882-00	COIL	
L609	1-410-997-31	INDUCTOR CHIP 2.2uH	
L610	1-410-985-11	INDUCTOR CHIP 0.22uH	
L611	1-410-997-41	INDUCTOR CHIP 2.2uH	
		< TRANSISTOR >	
Q601	8-729-904-87	TRANSISTOR 2SB1197K-R	
Q602	8-729-901-00	TRANSISTOR DTC124EK	
Q603	8-729-116-64	TRANSISTOR 2SK508-K51	
		< RESISTOR >	
R601	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R602	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R603	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R604	1-216-045-00	METAL CHIP 680 5% 1/10W	
R605	1-216-021-00	METAL CHIP 68 5% 1/10W	
R606	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R651	1-216-025-00	METAL CHIP 100 5% 1/10W	
R652	1-216-025-00	METAL CHIP 100 5% 1/10W	
R653	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R654	1-216-025-00	METAL CHIP 100 5% 1/10W	
R655	1-216-041-00	METAL CHIP 470 5% 1/10W	
R656	1-216-017-00	METAL CHIP 47 5% 1/10W	
R657	1-216-017-00	METAL CHIP 47 5% 1/10W	
R658	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R659	1-216-073-00	METAL CHIP 10K 5% 1/10W	

JACK KEY KEY FLEXIBLE MICROCOMPUTER SIGNAL FLEXIBLE

Ref. No.	Part No.	Description	Remark
R660	1-216-041-00	METAL CHIP 470 5%	1/10W
R661	1-216-041-00	METAL CHIP 470 5%	1/10W
R662	1-216-033-00	METAL CHIP 220 5%	1/10W
R663	1-216-025-00	METAL CHIP 100 5%	1/10W
R664	1-216-049-00	METAL CHIP 1K 5%	1/10W
R665	1-216-017-00	METAL CHIP 47 5%	1/10W
R666	1-216-097-00	METAL CHIP 100K 5%	1/10W
R667	1-216-065-00	METAL CHIP 4.7K 5%	1/10W
R668	1-216-033-00	METAL CHIP 220 5%	1/10W
		< SWITCH >	
SW601	1-552-574-21	SWITCH, SLIDE (SENS)	

****

* 1-640-222-11 KEY BOARD
****
1-640-353-11 KEY FLEXIBLE BOARD
****

< SWITCH >

Ref. No.	Part No.	Description	Remark
S809	1-553-977-00	SWITCH, SLIDE (9K/10K)	
S810	1-572-756-11	SWITCH, KEY RUBBER (SLEEP)	
S811	1-572-756-11	SWITCH, KEY RUBBER (LIGHT)	
S812	1-572-756-11	SWITCH, KEY RUBBER (TIMER STANDBY)	
S813	1-572-756-11	SWITCH, KEY RUBBER (KEY PROTECT)	
S814	1-572-756-11	SWITCH, KEY RUBBER (0)	
S815	1-572-756-11	SWITCH, KEY RUBBER (1)	
S816	1-572-756-11	SWITCH, KEY RUBBER (2)	
S817	1-572-756-11	SWITCH, KEY RUBBER (3)	
S818	1-572-756-11	SWITCH, KEY RUBBER (4)	
S819	1-572-756-11	SWITCH, KEY RUBBER (5)	
S820	1-572-756-11	SWITCH, KEY RUBBER (6)	
S821	1-572-756-11	SWITCH, KEY RUBBER (7)	
S822	1-572-756-11	SWITCH, KEY RUBBER (QUICK PAGE)	
S823	1-572-756-11	SWITCH, KEY RUBBER (8)	
S824	1-572-756-11	SWITCH, KEY RUBBER (9)	
S825	1-572-756-11	SWITCH, KEY RUBBER (AM MODE)	
S826	1-572-756-11	SWITCH, KEY RUBBER (SYNC)	
S827	1-572-756-11	SWITCH, KEY RUBBER (SSB)	
S828	1-572-756-11	SWITCH, KEY RUBBER (AM FAST/SLOW)	
S829	1-572-756-11	SWITCH, KEY RUBBER (SCAN/AUTO TUNE)	
S830	1-572-756-11	SWITCH, KEY RUBBER (EDIT)	
S831	1-572-756-11	SWITCH, KEY RUBBER (TIMER/PAGE)	
S832	1-572-756-11	SWITCH, KEY RUBBER (S1)	
S833	1-572-756-11	SWITCH, KEY RUBBER (S2)	
S834	1-572-756-11	SWITCH, KEY RUBBER (S3)	
S835	1-572-756-11	SWITCH, KEY RUBBER (S4)	
S836	1-572-756-11	SWITCH, KEY RUBBER (S5)	
S837	1-572-756-11	SWITCH, KEY RUBBER (RESERVE)	
S838	1-572-756-11	SWITCH, KEY RUBBER (TIMER CHECK/ERASE)	
S839	1-572-756-11	SWITCH, KEY RUBBER (ENTER)	
S840	1-572-756-11	SWITCH, KEY RUBBER (PAGE FEED INS CHR +)	
S841	1-572-756-11	SWITCH, KEY RUBBER (PAGE FEED DEL CHR -)	
S842	1-572-756-11	SWITCH, KEY RUBBER (MEMORY FREQ/METER BAND STEP/CURSOR R)	
S843	1-572-756-11	SWITCH, KEY RUBBER (MEMORY FREQ/METER BAND STEP/CURSOR L)	
S844	1-572-756-11	SWITCH, KEY RUBBER (EXE)	
S845	1-572-756-11	SWITCH, KEY RUBBER (AM)	
S846	1-572-756-11	SWITCH, KEY RUBBER (FM)	
S847	1-572-756-11	SWITCH, KEY RUBBER (METER BAND)	

****

* A-3679-243-A MICROCOMPUTER BOARD, COMPLETE (EXCEPT 1UK)
* A-3679-285-A MICROCOMPUTER BOARD, COMPLETE (1UK)
****

1-640-354-11 SIGNAL FLEXIBLE BOARD
****
* 3-368-570-01 HOLDER (LCD801)
* 3-368-591-01 PLATE (LCD), SHIELD
* 3-368-592-01 CASE (A), SHIELD

< CAPACITOR >

Ref. No.	Part No.	Description	Remark
C801	1-135-157-21	TANTALUM CHIP 10uF 20%	6.3V
C802	1-135-161-21	TANTALUM CHIP 22uF 10%	6.3V
C803	1-135-156-21	TANTALUM CHIP 6.8uF 10%	6.3V
C804	1-135-097-21	TANTALUM CHIP 15uF 10%	10V
C805	1-135-161-21	TANTALUM CHIP 22uF 10%	6.3V
C806	1-135-156-21	TANTALUM CHIP 6.8uF 10%	6.3V
C807	1-135-156-21	TANTALUM CHIP 6.8uF 10%	6.3V
C808	1-135-156-21	TANTALUM CHIP 6.8uF 10%	6.3V
C809	1-135-156-21	TANTALUM CHIP 6.8uF 10%	6.3V
C810	1-135-156-21	TANTALUM CHIP 6.8uF 10%	6.3V
C811	1-135-156-21	TANTALUM CHIP 6.8uF 10%	6.3V
C812	1-135-157-21	TANTALUM CHIP 10uF 20%	6.3V
C813	1-164-004-11	CERAMIC CHIP 0.1uF 10%	25V
C814	1-163-077-00	CERAMIC CHIP 0.1uF 10%	25V
C815	1-164-004-11	CERAMIC CHIP 0.1uF 10%	25V
C816	1-164-004-11	CERAMIC CHIP 0.1uF 10%	25V
C817	1-164-004-11	CERAMIC CHIP 0.1uF 10%	25V
C818	1-125-688-11	ELECT(BLOCK) 0.047F	6.3V
C819	1-164-346-11	CERAMIC CHIP 1uF	16V
C820	1-164-346-11	CERAMIC CHIP 1uF	16V
C821	1-162-942-11	CERAMIC CHIP 12PF 5%	50V
C822	1-162-930-11	CERAMIC CHIP 1PF 0.25PF	50V
C823	1-162-942-11	CERAMIC CHIP 12PF 5%	50V
C824	1-162-930-11	CERAMIC CHIP 1PF 0.25PF	50V

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Ref. No.	Part No.	Description	Remark
C825	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C826	1-162-953-11	CERAMIC CHIP 100PF 5% 50V	
C827	1-164-346-11	CERAMIC CHIP 1uF 16V	
C831	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C832	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C833	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C835	1-162-946-11	CERAMIC CHIP 27PF 5% 50V	
C836	1-162-945-11	CERAMIC CHIP 22PF 5% 50V	
C837	1-135-091-00	TANTALUM CHIP 1uF 20% 16V	
C838	1-162-953-11	CERAMIC CHIP 100PF 5% 50V	
C839	1-162-953-11	CERAMIC CHIP 100PF 5% 50V	
C840	1-162-953-11	CERAMIC CHIP 100PF 5% 50V	
C841	1-162-953-11	CERAMIC CHIP 100PF 5% 50V	
C842	1-162-953-11	CERAMIC CHIP 100PF 5% 50V	
C843	1-162-953-11	CERAMIC CHIP 100PF 5% 50V	
C844	1-162-953-11	CERAMIC CHIP 100PF 5% 50V	
C845	1-162-953-11	CERAMIC CHIP 100PF 5% 50V	
C846	1-162-961-11	CERAMIC CHIP 330PF 10% 50V	
C847	1-162-961-11	CERAMIC CHIP 330PF 10% 50V	
C848	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C849	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	
C850	1-162-953-11	CERAMIC CHIP 100PF 5% 50V	
C851	1-162-953-11	CERAMIC CHIP 100PF 5% 50V	
C852	1-162-953-11	CERAMIC CHIP 100PF 5% 50V	
C853	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C854	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C855	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C856	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C857	1-135-148-21	TANTAL. CHIP 1.5uF 20% 10V	
C858	1-163-077-00	CERAMIC CHIP 0.1uF 10% 25V	
C859	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C860	1-163-077-00	CERAMIC CHIP 0.1uF 10% 25V	
C861	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	
C862	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	
C863	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	
C864	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	
C865	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	
C866	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	

< CONNECTOR >

Ref. No.	Part No.	Description	Remark
CN801	1-573-206-21	CONNECTOR, FPC (PC BOARD) 15P	
CN802	1-573-181-11	HOUSING, CONNECTOR 3P	

< TRIMMER >

Ref. No.	Part No.	Description	Remark
CT801	1-141-345-11	CAP, VAR, TRIMMER (CHIP TYPE)	
CT802	1-141-345-11	CAP, VAR, TRIMMER (CHIP TYPE)	

< DIODE >

Ref. No.	Part No.	Description	Remark
D802	8-719-951-22	DIODE IMN10	
D803	8-719-951-22	DIODE IMN10	
D804	8-719-941-86	DIODE DAN202U	
D805	8-719-941-86	DIODE DAN202U	
D806	8-719-988-82	DIODE RB715F	
D807	8-719-951-22	DIODE IMN10	
D808	8-719-988-82	DIODE RB715F	
D809	8-719-938-72	DIODE SB01-05CP	
D810	8-719-941-86	DIODE DAN202U	
D811	8-719-941-86	DIODE DAN202U	
D812	8-719-938-72	DIODE SB01-05CP	
D813	8-719-989-49	DIODE SLP-389F-51-AB	
D814	8-719-989-49	DIODE SLP-389F-51-AB	
D815	8-719-989-49	DIODE SLP-389F-51-AB	
D816	8-719-989-49	DIODE SLP-389F-51-AB	
D817	8-719-989-49	DIODE SLP-389F-51-AB	
D818	8-719-989-49	DIODE SLP-389F-51-AB	
D819	8-719-941-86	DIODE DAN202U	

< IC >

Ref. No.	Part No.	Description	Remark
IC801	8-759-636-82	IC M50933-124FP	
IC802	8-759-636-81	IC M37450M8-456FP	
IC803	8-759-514-65	IC NJU6417BF	
IC804	8-759-514-66	IC SED1210F1G	
IC805	8-759-153-90	IC uPD7225GB-3B7	
IC806	8-759-507-13	IC X24C16S-C7000	
IC807	8-759-925-74	IC SN74HC04ANS	
IC808	8-759-927-46	IC SN74HC00ANS	
IC809	8-759-927-46	IC SN74HC00ANS	
IC811	8-759-939-41	IC S-81230AG-RB-S	
IC812	8-759-503-44	IC RF5RD501C	
IC814	8-759-519-46	IC S-80730AN-DT-S	
IC815	8-759-514-72	IC S-80725AL-AN	
IC816	8-759-008-36	IC MC74HC4049F	
IC817	8-759-514-67	IC RF5RD301A	

< COIL >

Ref. No.	Part No.	Description	Remark
L801	1-412-637-51	INDUCTOR 330uH	
L802	1-410-793-51	INDUCTOR CHIP 2.2mH	
L803	1-410-793-51	INDUCTOR CHIP 2.2mH	
L804	1-410-793-51	INDUCTOR CHIP 2.2mH	

< LIQUID CRYSTAL DISPLAY >

Ref. No.	Part No.	Description	Remark
LCD801	1-809-368-11	DISPLAY PANEL, LIQUID CRYSTAL	
LCD802	1-809-367-11	DISPLAY PANEL, LIQUID CRYSTAL	

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Ref. No.	Part No.	Description	Remark
		< TRANSISTOR >	
Q801	8-729-921-73	TRANSISTOR 2SD1781K-QR	
Q802	8-729-924-14	TRANSISTOR DTA124TU	
Q803	8-729-905-61	TRANSISTOR DTC124EU	
Q804	8-729-920-63	TRANSISTOR DTA123EK	
Q805	8-729-144-98	TRANSISTOR 2SK1580	
Q806	8-729-144-98	TRANSISTOR 2SK1580	
Q807	8-729-144-98	TRANSISTOR 2SK1580	
Q808	8-729-117-32	TRANSISTOR 2SC4177-L6	
Q810	8-729-924-14	TRANSISTOR DTA124TU	
Q811	8-729-905-61	TRANSISTOR DTC124EU	
Q812	8-729-905-61	TRANSISTOR DTC124EU	
		< RESISTOR >	
R801	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R802	1-216-803-11	METAL CHIP 33 5% 1/16W	
R804	1-216-863-11	METAL GLAZE 3.3M 5% 1/16W	
R805	1-216-851-11	METAL CHIP 330K 5% 1/16W	
R806	1-216-857-11	METAL CHIP 1M 5% 1/16W	
R807	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R808	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R809	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R810	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R811	1-216-809-11	METAL CHIP 100 5% 1/16W	
R812	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R813	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R814	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R815	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R816	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R817	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R818	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R819	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R820	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R821	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R823	1-216-001-00	METAL CHIP 10 5% 1/10W	
R824	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R825	1-216-001-00	METAL CHIP 10 5% 1/10W	
R826	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R827	1-216-857-11	METAL CHIP 1M 5% 1/16W	
R828	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R829	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R830	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R831	1-216-849-11	METAL CHIP 220K 5% 1/16W	
R832	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R833	1-216-027-00	METAL CHIP 120 5% 1/10W	
R834	1-216-027-00	METAL CHIP 120 5% 1/10W	
R835	1-216-027-00	METAL CHIP 120 5% 1/10W	
R836	1-216-027-00	METAL CHIP 120 5% 1/10W	
R837	1-216-027-00	METAL CHIP 120 5% 1/10W	
R838	1-216-027-00	METAL CHIP 120 5% 1/10W	
R839	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R840	1-216-001-00	METAL CHIP 10 5% 1/10W	
R841	1-216-803-11	METAL CHIP 33 5% 1/16W	
R842	1-216-001-00	METAL CHIP 10 5% 1/10W	
R843	1-216-013-00	METAL CHIP 33 5% 1/10W	
R844	1-216-815-11	METAL CHIP 330 5% 1/16W	
R845	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R846	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R847	1-216-851-11	METAL CHIP 330K 5% 1/16W	
R848	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R849	1-216-815-11	METAL CHIP 330 5% 1/16W	
R850	1-216-838-11	METAL CHIP 27K 5% 1/16W	
R851	1-216-848-11	METAL CHIP 180K 5% 1/16W	
R852	1-216-848-11	METAL CHIP 180K 5% 1/16W	
R853	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R854	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R855	1-216-827-11	METAL CHIP 3.3K 5% 1/16W	
R856	1-216-853-11	METAL CHIP 470K 5% 1/16W	
R857	1-216-853-11	METAL CHIP 470K 5% 1/16W	
R858	1-216-853-11	METAL CHIP 470K 5% 1/16W	
R859	1-216-857-11	METAL CHIP 1M 5% 1/16W	
R860	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R861	1-216-857-11	METAL CHIP 1M 5% 1/16W	
R862	1-216-857-11	METAL CHIP 1M 5% 1/16W	
R863	1-216-857-11	METAL CHIP 1M 5% 1/16W	
R864	1-216-857-11	METAL CHIP 1M 5% 1/16W	
R865	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R866	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R867	1-216-809-11	METAL CHIP 100 5% 1/16W	
R868	1-216-838-11	METAL CHIP 27K 5% 1/16W	
R869	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R870	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R871	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R872	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R873	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R874	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R875	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R876	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R877	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R878	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R879	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R880	1-216-809-11	METAL CHIP 100 5% 1/16W	
R881	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R882	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R883	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R884	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R885	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R886	1-216-845-11	METAL CHIP 100K 5% 1/16W	

Ref. No.	Part No.	Description	Remark
R887	1-216-845-11	METAL CHIP 100K 5%	1/16W
R888	1-216-845-11	METAL CHIP 100K 5%	1/16W
R889	1-216-845-11	METAL CHIP 100K 5%	1/16W
R890	1-216-845-11	METAL CHIP 100K 5%	1/16W
R891	1-216-846-11	METAL CHIP 120K 5%	1/16W
		< NETWORK >	
RB801	1-236-863-21	RES, NETWORK 10KX2	
RB802	1-236-500-11	RES, NETWORK 10KX3	
RB803	1-236-500-11	RES, NETWORK 10KX3	
RB804	1-236-500-11	RES, NETWORK 1KX3	
RB805	1-236-499-11	RES, NETWORK 1KX3	
RB806	1-236-499-11	RES, NETWORK 10KX2	
RB807	1-236-863-21	RES, NETWORK 10KX2	
RB808	1-236-863-21	RES, NETWORK 10KX2	
RB809	1-236-500-11	RES, NETWORK 10KX3	
		< VARIABLE RESISTOR >	
RV801	1-238-772-11	RES, VAR, CARBON (ROTARY) 10K (LCD CONTRAST)	
		< SWITCH >	
S801	1-570-990-11	SWITCH, TACT (LOCAL)	
S802	1-570-990-11	SWITCH, TACT (TIME DIFF)	
S803	1-570-990-11	SWITCH, TACT (TIME/PROGRAM)	
S804	1-570-990-11	SWITCH, TACT (LOCAL TIME/VTC)	
S805	1-570-990-11	SWITCH, TACT (FREE)	
S806	1-571-381-21	SWITCH, TACTIL (REFLOW TYPE) (ON/OFF)	
S807	1-571-754-11	SWITCH, PUSH (1 KEY) (LOCK)	
S808	1-553-977-00	SWITCH, SLIDE (DIAL LOCK)	
S848	1-570-990-11	SWITCH, TACT (RESET)	
		< VIBRATOR, CERAMIC >	
X801	1-567-098-41	VIBRATOR, CRYSTAL 32.768KHz	
X802	1-577-703-21	VIBRATOR, CERAMIC 2.0MHz	
X803	1-577-703-21	VIBRATOR, CERAMIC 2.0MHz	

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* A-3679-241-A SIGNAL BOARD, COMPLETE (EXCEPT 1UK)
* A-3679-283-A SIGNAL BOARD, COMPLETE (1UK)
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* 3-368-624-01 CASE (B), SHIELD
* 3-368-625-01 CASE (C), SHIELD
* 3-368-626-01 CASE (D), SHIELD

Ref. No.	Part No.	Description	Remark
		< ANTENNA >	
ANT2	1-402-557-11	ANTENNA, FERRITE-ROD	
		< CAPACITOR >	
C1	1-163-091-00	CERAMIC CHIP 8PF	50V
C2	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C3	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C4	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C5	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C6	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C7	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C8	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C9	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C10	1-164-232-11	CERAMIC CHIP 0.01uF	50V (EXCEPT 1UK)
C11	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C12	1-163-125-00	CERAMIC CHIP 220PF 5%	50V
C13	1-163-107-00	CERAMIC CHIP 39PF 5%	50V
C14	1-163-125-00	CERAMIC CHIP 220PF 5%	50V
C16	1-163-129-00	CERAMIC CHIP 330PF 5%	50V
C17	1-163-113-00	CERAMIC CHIP 68PF 5%	50V
C18	1-163-137-00	CERAMIC CHIP 680PF 5%	50V
C19	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C20	1-163-139-00	CERAMIC CHIP 820PF 5%	50V
C21	1-163-117-00	CERAMIC CHIP 100PF 5%	50V
C22	1-163-012-00	CERAMIC CHIP 0.0018uF 10%	50V
C23	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C24	1-163-145-00	CERAMIC CHIP 0.0015uF 5%	50V
C25	1-163-127-00	CERAMIC CHIP 270PF 5%	50V
C26	1-163-014-00	CERAMIC CHIP 0.0027uF 10%	50V
C28	1-163-017-00	CERAMIC CHIP 0.0047uF 5%	50V
C29	1-163-129-00	CERAMIC CHIP 330PF 5%	50V
C30	1-163-016-00	CERAMIC CHIP 0.0039uF 10%	50V
C32	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C33	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C34	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C35	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C36	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C37	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C39	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C40	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C41	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C42	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C43	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C44	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C45	1-163-107-00	CERAMIC CHIP 39PF 5%	50V
C46	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C47	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C48	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C49	1-163-090-00	CERAMIC CHIP 7PF	50V

SIGNAL

Ref. No.	Part No.	Description			Remark
C50	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C51	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C52	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C53	1-163-095-00	CERAMIC CHIP	12PF	5%	50V
C54	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C55	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C56	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C57	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C58	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C59	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C60	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C61	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C62	1-135-155-21	TANTALUM CHIP	4.7uF	10%	10V
C63	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C64	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C65	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C66	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C67	1-162-638-11	CERAMIC CHIP	1uF		16V
C68	1-162-638-11	CERAMIC CHIP	1uF		16V
C201	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C202	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C203	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C204	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C205	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C206	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C207	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C208	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C209	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C210	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C211	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C212	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C213	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C214	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C215	1-163-088-00	CERAMIC CHIP	5PF		50V
C251	1-163-087-00	CERAMIC CHIP	4PF		50V
C252	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C254	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C255	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C256	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C257	1-126-209-11	ELECT CHIP	100uF	20%	4V
C258	1-163-086-00	CERAMIC CHIP	3PF		50V
C259	1-163-085-00	CERAMIC CHIP	2PF		50V
C260	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C261	1-163-123-00	CERAMIC CHIP	180PF	5%	50V
C262	1-163-085-00	CERAMIC CHIP	2PF		50V
C263	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C264	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C265	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C266	1-163-083-00	CERAMIC CHIP	1PF		50V
C267	1-163-091-00	CERAMIC CHIP	8PF		50V
C268	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C269	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C301	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C302	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C303	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C304	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C305	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C306	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C307	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C308	1-126-199-11	ELECT CHIP	6.8uF	20%	35V
C309	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C310	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C311	1-164-346-11	CERAMIC CHIP	1uF		16V
C312	1-163-107-00	CERAMIC CHIP	39PF	5%	50V
C314	1-126-603-11	ELECT CHIP	4.7uF	20%	35V
C315	1-126-193-11	ELECT	1uF	20%	50V
C316	1-163-095-00	CERAMIC CHIP	12PF	5%	50V
C317	1-163-095-00	CERAMIC CHIP	12PF	5%	50V
C318	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C319	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C320	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C321	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C322	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C323	1-135-167-21	TANTAL. CHIP	68uF	20%	4V
C325	1-163-108-00	CERAMIC CHIP	43PF	5%	50V
C326	1-126-246-11	ELECT CHIP	220uF	20%	4V
C327	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C328	1-164-774-11	FILM CHIP	0.0022uF	5%	16V
C329	1-164-782-11	FILM CHIP	0.01uF	5%	16V
C330	1-163-083-00	CERAMIC CHIP	1PF		50V
C331	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C332	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C334	1-163-089-00	CERAMIC CHIP	6PF		50V
C335	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C338	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C339	1-164-346-11	CERAMIC CHIP	1uF		16V
C340	1-164-346-11	CERAMIC CHIP	1uF		16V
C404	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C405	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C406	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C408	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C409	1-126-209-11	ELECT CHIP	100uF	20%	4V
C410	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C411	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C412	1-164-346-11	CERAMIC CHIP	1uF		16V
C413	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C414	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C415	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V

Ref. No.	Part No.	Description			Remark
C416	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C417	1-163-024-00	CERAMIC CHIP	0.018uF	10%	50V
C418	1-163-012-00	CERAMIC CHIP	0.0018uF	10%	50V
C419	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C420	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C421	1-164-346-11	CERAMIC CHIP	1uF		16V
C424	1-163-024-00	CERAMIC CHIP	0.018uF	10%	50V
C425	1-163-012-00	CERAMIC CHIP	0.0018uF	10%	50V
C426	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C427	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C428	1-164-346-11	CERAMIC CHIP	1uF		16V
C429	1-164-346-11	CERAMIC CHIP	1uF		16V
C430	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C440	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C441	1-126-246-11	ELECT CHIP	220uF	20%	4V
C442	1-128-361-11	ELECT	470uF	20%	10V
C443	1-163-108-00	CERAMIC CHIP	43PF	5%	50V
C444	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C445	1-128-361-11	ELECT	470uF	20%	10V
C446	1-128-359-11	ELECT	100uF	20%	10V
C447	1-128-360-11	ELECT	220uF	20%	10V
C448	1-126-246-11	ELECT CHIP	220uF	20%	4V
C449	1-163-108-00	CERAMIC CHIP	43PF	5%	50V
C450	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C451	1-128-359-11	ELECT	100uF	20%	10V
C452	1-128-361-11	ELECT	470uF	20%	10V
C453	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C454	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C455	1-126-204-11	ELECT CHIP	47uF	20%	16V
C456	1-164-346-11	CERAMIC CHIP	1uF		16V
C457	1-164-346-11	CERAMIC CHIP	1uF		16V
C458	1-164-346-11	CERAMIC CHIP	1uF		16V
C460	1-164-346-11	CERAMIC CHIP	1uF		16V
C461	1-164-346-11	CERAMIC CHIP	1uF		16V
C462	1-164-346-11	CERAMIC CHIP	1uF		16V
C463	1-164-346-11	CERAMIC CHIP	1uF		16V
C464	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C465	1-126-246-11	ELECT CHIP	220uF	20%	4V
C466	1-164-346-11	CERAMIC CHIP	1uF		16V
C467	1-164-346-11	CERAMIC CHIP	1uF		16V
C468	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C501	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C502	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C503	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C504	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C505	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C506	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C507	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C508	1-164-232-11	CERAMIC CHIP	0.01uF		50V

Ref. No.	Part No.	Description			Remark
C509	1-163-093-00	CERAMIC CHIP	10PF	5%	50V
C511	1-130-834-00	FILM	1uF	10%	63V
C512	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C513	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C514	1-163-083-00	CERAMIC CHIP	1PF		50V
C515	1-162-839-11	CERAMIC	0.01uF	10%	16V (EXCEPT 1UK)
C515	1-163-839-91	CERAMIC CHIP	1.5PF	0.25PF	50V(1UK)
C516	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C517	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C518	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C519	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C520	1-163-083-00	CERAMIC CHIP	1PF		50V
C521	1-163-093-00	CERAMIC CHIP	10PF	5%	50V
C522	1-163-102-00	CERAMIC CHIP	24PF	5%	50V
C523	1-163-102-00	CERAMIC CHIP	24PF	5%	50V
C524	1-163-089-00	CERAMIC CHIP	6PF		50V
C525	1-163-102-00	CERAMIC CHIP	24PF	5%	50V
C526	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C527	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C528	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C529	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C530	1-126-246-11	ELECT CHIP	220uF	20%	4V
C531	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C532	1-125-701-11	CAP, DOUBLE LAYER			
C533	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C534	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C535	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C536	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C537	1-130-833-00	FILM	0.82uF	10%	63V
C538	1-162-839-11	CERAMIC	0.01uF	10%	16V (EXCEPT 1UK)
C538	1-163-839-91	CERAMIC CHIP	1.5PF	0.25PF	50V(1UK)
C539	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C540	1-163-085-00	CERAMIC CHIP	2PF		50V
C541	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C542	1-126-209-11	ELECT CHIP	100uF	20%	4V
C543	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C544	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C545	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C546	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C547	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C548	1-163-085-00	CERAMIC CHIP	2PF		50V
C549	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C550	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C551	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C552	1-163-083-00	CERAMIC CHIP	1PF		50V
C553	1-163-091-00	CERAMIC CHIP	8PF		50V

SIGNAL

Ref. No.	Part No.	Description			Remark
C554	1-163-091-00	CERAMIC CHIP	8PF		50V
C556	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C557	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C558	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C701	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C702	1-163-093-00	CERAMIC CHIP	10PF	5%	50V
C704	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C705	1-162-638-11	CERAMIC CHIP	1uF		16V
C706	1-162-638-11	CERAMIC CHIP	1uF		16V

< FILTER >

Ref. No.	Part No.	Description
CF301	1-577-030-11	FILTER, CERAMIC
CF302	1-567-945-11	FILTER, CERAMIC
CF303	1-577-599-11	FILTER, CERAMIC
CF304	1-577-599-11	FILTER, CERAMIC
CF305	1-577-599-11	FILTER, CERAMIC

< CONNECTOR >

Ref. No.	Part No.	Description
CN1	* 1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P
CN103	* 1-568-714-11	PIN, CONNECTOR 7P
CN104	1-580-276-11	PIN, CONNECTOR 8P
CN301	* 1-564-713-51	PIN, CONNECTOR (SMALL TYPE) 11P
CN401	1-573-206-21	CONNECTOR, FPC (PC BOARD) 15P

< TRIMMER >

Ref. No.	Part No.	Description
CT1	1-141-322-11	CAP, VAR, TRIMMER (CHIP TYPE)
CT2	1-141-322-11	CAP, VAR, TRIMMER (CHIP TYPE)
CT3	1-141-322-11	CAP, VAR, TRIMMER (CHIP TYPE)
CT4	1-141-322-11	CAP, VAR, TRIMMER (CHIP TYPE)
CT5	1-141-322-11	CAP, VAR, TRIMMER (CHIP TYPE)
CT201	1-141-327-11	CAP, VAR, TRIMMER (CHIP TYPE)
CT202	1-141-327-11	CAP, VAR, TRIMMER (CHIP TYPE)
CT251	1-141-327-11	CAP, VAR, TRIMMER (CHIP TYPE)
CT252	1-141-327-11	CAP, VAR, TRIMMER (CHIP TYPE)
CT253	1-141-327-11	CAP, VAR, TRIMMER (CHIP TYPE)
CT501	1-141-322-11	CAP, VAR, TRIMMER (CHIP TYPE)
CT502	1-141-327-11	CAP, VAR, TRIMMER (CHIP TYPE)
CT503	1-141-327-11	CAP, VAR, TRIMMER (CHIP TYPE)

< DIODE >

Ref. No.	Part No.	Description		Remark
D1	8-719-123-79	DIODE	1SS279	
D2	8-719-123-79	DIODE	1SS279	
D3	8-719-123-79	DIODE	1SS279	
D4	8-719-123-79	DIODE	1SS279	
D5	8-719-123-79	DIODE	1SS279	
D6	8-719-123-79	DIODE	1SS279	
D7	8-719-123-79	DIODE	1SS279	
D8	8-719-123-79	DIODE	1SS279	
D9	8-719-123-79	DIODE	1SS279	
D10	8-719-123-79	DIODE	1SS279	
D11	8-719-123-79	DIODE	1SS279	
D12	8-719-104-34	DIODE	1S2836	
D13	8-719-123-79	DIODE	1SS279	
D14	8-719-123-79	DIODE	1SS279	
D15	8-719-123-79	DIODE	1SS279	
D16	8-719-123-79	DIODE	1SS279	
D17	8-719-400-18	DIODE	MA152WK	
D18	8-719-123-79	DIODE	1SS279	
D19	8-719-123-79	DIODE	1SS279	
D20	8-719-123-79	DIODE	1SS279	
D21	8-719-400-18	DIODE	MA152WK	
D22	8-719-400-18	DIODE	MA152WK	
D201	8-719-104-34	DIODE	1S2836	
D202	8-719-104-34	DIODE	1S2836	
D204	8-719-400-18	DIODE	MA152WK	
D205	8-719-400-18	DIODE	MA152WK	
D206	8-719-104-34	DIODE	1S2836	
D253	8-713-300-57	DIODE	1T33	
D254	8-713-300-57	DIODE	1T33	
D255	8-713-300-57	DIODE	1T33	
D256	8-713-300-57	DIODE	1T33	
D301	8-719-400-18	DIODE	MA152WK	
D302	8-719-400-18	DIODE	MA152WK	
D303	8-719-400-18	DIODE	MA152WK	
D304	8-719-400-18	DIODE	MA152WK	
D305	8-719-400-18	DIODE	MA152WK	
D306	8-719-400-18	DIODE	MA152WK	
D401	8-719-157-36	DIODE	RD6.8M-B	
D402	8-719-400-18	DIODE	MA152WK	
D403	8-719-400-18	DIODE	MA152WK	
D410	8-719-938-72	DIODE	SB01-05CP	
D501	8-719-800-76	DIODE	1SS226	
D502	8-713-300-57	DIODE	1T33	
D503	8-713-300-57	DIODE	1T33	
D504	8-719-157-36	DIODE	RD6.8M-B	
D505	8-719-157-36	DIODE	RD6.8M-B	
D506	8-719-938-72	DIODE	SB01-05CP	
D701	8-719-106-62	DIODE	RD11M-B2	
D702	8-719-400-18	DIODE	MA152WK	

< IC >

Ref. No.	Part No.	Description		Remark
IC1	8-759-925-74	IC	SN74HC04ANS	
IC2	8-759-926-11	IC	SN74HC138ANS	
IC3	8-759-009-22	IC	MC14094BF	
IC301	8-752-055-83	IC	CXA1376S	
IC401	8-759-998-98	IC	LM358DR	
IC402	8-759-011-65	IC	MC74HC4053F	
IC403	8-759-804-98	IC	LA3335M	
IC405	8-759-144-31	IC	uPC1316C	

SIGNAL

Ref. No.	Part No.	Description	Remark
IC406	8-759-009-22	IC MC14094BF	
IC407	8-759-926-64	IC SN74HC367ANS	
IC408	8-759-801-15	IC LA5003M	
IC409	8-759-998-98	IC LM358DR	
IC501	8-752-323-84	IC CXD1118M	
IC502	8-752-323-84	IC CXD1118M	
IC503	8-759-144-23	IC uPC1037GR	
IC504	8-759-144-23	IC uPC1037GR	
IC505	8-759-925-72	IC SN74HC02ANS	
IC506	8-759-801-15	IC LA5003M	

< COIL >

Ref. No.	Part No.	Description	Remark
L1	1-410-987-11	INDUCTOR CHIP 0.33uH	
L2	1-410-985-11	INDUCTOR CHIP 0.22uH	
L3	1-410-985-11	INDUCTOR CHIP 0.22uH	
L4	1-410-991-11	INDUCTOR CHIP 0.68uH	
L6	1-410-989-11	INDUCTOR CHIP 0.47uH	
L7	1-410-989-11	INDUCTOR CHIP 0.47uH	
L8	1-410-992-11	INDUCTOR CHIP 0.82uH	
L10	1-410-991-11	INDUCTOR CHIP 0.68uH	
L11	1-410-992-11	INDUCTOR CHIP 0.82uH	
L12	1-410-994-11	INDUCTOR CHIP 1.2uH	
L14	1-410-993-11	INDUCTOR CHIP 1uH	
L15	1-410-994-11	INDUCTOR CHIP 1.2uH	
L16	1-410-997-31	INDUCTOR CHIP 2.2uH	
L18	1-410-997-31	INDUCTOR CHIP 2.2uH	
L19	1-410-997-31	INDUCTOR CHIP 2.2uH	
L20	1-410-993-11	INDUCTOR CHIP 1uH	
L22	1-410-393-11	INDUCTOR CHIP 100uH	
L23	1-410-993-11	INDUCTOR CHIP 1uH	
L24	1-410-993-11	INDUCTOR CHIP 1uH	
L25	1-410-992-11	INDUCTOR CHIP 0.82uH	
L26	1-412-006-31	INDUCTOR CHIP 10uH	
L201	1-410-658-31	INDUCTOR CHIP 220uH	
L202	1-410-793-51	INDUCTOR CHIP 2.2mH	
L251	1-410-993-11	INDUCTOR CHIP 1uH	
L252	1-406-422-11	COIL (OSC)	
L253	1-410-997-31	INDUCTOR CHIP 2.2uH	
L254	1-410-986-31	INDUCTOR CHIP 0.27uH	
L255	1-410-985-11	INDUCTOR CHIP 0.22uH	
L301	1-406-423-11	COIL (OSC)	
L302	1-426-561-11	COIL (RF)	
L303	1-426-561-11	COIL (RF)	
L304	1-410-988-11	I1N1DUCTOR CHIP 0.39uH	
L305	1-412-006-31	INDUCTOR CHIP 10uH	
L306	1-410-986-31	INDUCTOR CHIP 0.27uH	
L307	1-410-985-11	INDUCTOR CHIP 0.22uH	
L308	1-410-989-11	INDUCTOR CHIP 0.47uH	
L501	1-406-420-11	COIL (OSC)	
L502	1-406-421-11	COIL (OSC)	
L503	1-412-011-31	INDUCTOR CHIP 27uH	
L504	1-412-011-31	INDUCTOR CHIP 27uH	
L505	1-410-996-31	INDUCTOR CHIP 1.8uH	
L506	1-410-992-11	INDUCTOR CHIP 0.82uH	
L507	1-410-989-11	INDUCTOR CHIP 0.47uH	
L508	1-412-011-31	INDUCTOR CHIP 27uH	
L509	1-412-004-31	INDUCTOR CHIP 6.8uH	
L510	1-410-993-11	INDUCTOR CHIP 1uH	
L511	1-410-989-11	INDUCTOR CHIP 0.47uH	
L512	1-410-987-11	INDUCTOR CHIP 0.33uH	
L514	1-412-006-31	INDUCTOR CHIP 10uH	
L701	1-410-658-31	INDUCTOR CHIP 220uH	
L702	1-412-011-31	INDUCTOR CHIP 27uH	

< TRANSISTOR >

Ref. No.	Part No.	Description	Remark
Q1	8-729-901-00	TRANSISTOR DTC124EK	
Q2	8-729-901-00	TRANSISTOR DTC124EK	
Q3	8-729-901-00	TRANSISTOR DTC124EK	
Q4	8-729-901-00	TRANSISTOR DTC124EK	
Q5	8-729-116-64	TRANSISTOR 2SK508-K51	
Q6	8-729-216-22	TRANSISTOR 2SA1162-G	
Q7	8-729-901-00	TRANSISTOR DTC124EK	
Q8	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q9	8-729-116-64	TRANSISTOR 2SK508-K51	
Q10	8-729-116-64	TRANSISTOR 2SK508-K51	
Q11	8-729-904-87	TRANSISTOR 2SB1197K-R	
Q12	8-729-116-64	TRANSISTOR 2SK508-K51	
Q13	8-729-216-22	TRANSISTOR 2SA1162-G	
Q14	8-729-216-22	TRANSISTOR 2SA1162-G	
Q15	8-729-901-00	TRANSISTOR DTC124EK	
Q201	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q202	8-729-116-64	TRANSISTOR 2SK508-K51	
Q203	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q204	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q205	8-729-116-64	TRANSISTOR 2SK508-K51	
Q206	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q208	8-729-900-51	TRANSISTOR DTA114TK	
Q209	8-729-900-51	TRANSISTOR DTA114TK	
Q210	8-729-900-51	TRANSISTOR DTA114TK	
Q251	8-729-123-86	TRANSISTOR 2SK238-K16	
Q252	8-729-920-38	TRANSISTOR 2SC2059K-N	
Q253	8-729-920-38	TRANSISTOR 2SC2059K-N	
Q254	8-729-208-47	TRANSISTOR 2SK210GR	
Q255	8-729-900-51	TRANSISTOR DTA114TK	
Q301	8-729-901-05	TRANSISTOR DTA124EK	

SIGNAL

Ref. No.	Part No.	Description	Remark
Q302	8-729-901-00	TRANSISTOR DTC124EK	
Q303	8-729-901-00	TRANSISTOR DTC124EK	
Q304	8-729-216-22	TRANSISTOR 2SA1162-G	
Q305	8-729-901-00	TRANSISTOR DTC124EK	
Q307	8-729-901-05	TRANSISTOR DTA124EK	
Q308	8-729-901-00	TRANSISTOR DTC124EK	
Q309	8-729-114-63	TRANSISTOR 3SK132A-U36	
Q310	8-729-901-00	TRANSISTOR DTC124EK	
Q311	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q312	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q313	8-729-920-38	TRANSISTOR 2SC2059K-N	
Q314	8-729-901-00	TRANSISTOR DTC124EK	
Q315	8-729-901-00	TRANSISTOR DTC124EK	
Q316	8-729-216-22	TRANSISTOR 2SA1162-G	
Q317	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q318	8-729-901-00	TRANSISTOR DTC124EK	
Q319	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q320	8-729-901-00	TRANSISTOR DTC124EK	
Q321	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q322	8-729-901-00	TRANSISTOR DTC124EK	
Q401	8-729-921-72	TRANSISTOR 2SD1781K-R	
Q402	8-729-901-05	TRANSISTOR DTA124EK	
Q403	8-729-901-05	TRANSISTOR DTA124EK	
Q404	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q405	8-729-921-72	TRANSISTOR 2SD1781K-R	
Q406	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q407	8-729-921-72	TRANSISTOR 2SD1781K-R	
Q408	8-729-106-60	TRANSISTOR 2SB1115A-YQ	
Q409	8-729-904-87	TRANSISTOR 2SB1197K-R	
Q410	8-729-901-00	TRANSISTOR DTC124EK	
Q411	8-729-921-72	TRANSISTOR 2SD1781K-R	
Q501	8-729-220-93	TRANSISTOR 2SK209-G	
Q502	8-729-220-93	TRANSISTOR 2SK209-G	
Q503	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q504	8-729-920-38	TRANSISTOR 2SC2059K-N	
Q505	8-729-208-47	TRANSISTOR 2SK210GR	
Q506	8-729-904-87	TRANSISTOR 2SB1197K-R	
Q507	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q508	8-729-220-93	TRANSISTOR 2SK209-G	
Q509	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q510	8-729-208-47	TRANSISTOR 2SK210GR	
Q701	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q702	8-729-120-28	TRANSISTOR 2SC1623-L5L6	

< RESISTOR >

Ref. No.	Part No.	Description	Remark
R1	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R2	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R3	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R4	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R5	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R6	1-216-039-00	METAL CHIP 390 5% 1/10W	
R7	1-216-039-00	METAL CHIP 390 5% 1/10W	
R8	1-216-039-00	METAL CHIP 390 5% 1/10W	
R9	1-216-039-00	METAL CHIP 390 5% 1/10W	
R10	1-216-039-00	METAL CHIP 390 5% 1/10W	
R11	1-216-039-00	METAL CHIP 390 5% 1/10W	
R12	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R13	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R14	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R15	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R16	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R17	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R18	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R19	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R20	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R21	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R22	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R23	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R24	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R25	1-216-017-00	METAL CHIP 47 5% 1/10W	
R26	1-216-037-00	METAL CHIP 330 5% 1/10W	
R27	1-216-017-00	METAL CHIP 47 5% 1/10W	
R28	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R29	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R30	1-216-025-00	METAL CHIP 100 5% 1/10W	
R31	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R32	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R33	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R34	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R35	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R36	1-216-017-00	METAL CHIP 47 5% 1/10W	
R37	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R38	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R39	1-216-025-00	METAL CHIP 100 5% 1/10W	
R40	1-216-025-00	METAL CHIP 100 5% 1/10W	
R41	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R42	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R43	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R44	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R45	1-216-017-00	METAL CHIP 47 5% 1/10W	
R47	1-216-017-00	METAL CHIP 47 5% 1/10W	
R48	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R49	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R50	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R51	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R52	1-216-113-00	METAL CHIP 470K 5% 1/10W	
R53	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R54	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	

SIGNAL

Ref. No.	Part No.	Description				Remark
R55	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R56	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R57	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R58	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R59	1-216-025-00	METAL CHIP	100	5%	1/10W	
R60	1-216-025-00	METAL CHIP	100	5%	1/10W	
R61	1-216-025-00	METAL CHIP	100	5%	1/10W	
R62	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R201	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R202	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R203	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R204	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R205	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R206	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R207	1-216-009-00	METAL CHIP	22	5%	1/10W	
R208	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R209	1-216-033-00	METAL CHIP	220	5%	1/10W	
R210	1-216-009-00	METAL CHIP	22	5%	1/10W	
R211	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R212	1-216-033-00	METAL CHIP	220	5%	1/10W	
R213	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R214	1-216-295-00	METAL CHIP	0	5%	1/10W	
R215	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R216	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R253	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R255	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R256	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R257	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R258	1-216-025-00	METAL CHIP	100	5%	1/10W	
R259	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R260	1-216-111-00	METAL CHIP	390K	5%	1/10W	
R261	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R262	1-216-295-00	METAL CHIP	0	5%	1/10W	
R263	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	
R264	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R265	1-216-033-00	METAL CHIP	220	5%	1/10W	
R266	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R267	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R268	1-216-013-00	METAL CHIP	33	5%	1/10W	
R269	1-216-017-00	METAL CHIP	47	5%	1/10W	
R270	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R301	1-216-017-00	METAL CHIP	47	5%	1/10W	
R302	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R303	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R304	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R305	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R306	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R307	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R308	1-216-049-00	METAL CHIP	1K	5%	1/10W	

Ref. No.	Part No.	Description				Remark
R309	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R310	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R311	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R312	1-216-001-00	METAL CHIP	10	5%	1/10W	
R313	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R314	1-216-025-00	METAL CHIP	100	5%	1/10W	
R315	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R316	1-216-295-00	METAL CHIP	0	5%	1/10W	
R317	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R318	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R319	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R320	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R321	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R324	1-216-017-00	METAL CHIP	47	5%	1/10W	
R325	1-216-033-00	METAL CHIP	220	5%	1/10W	
R327	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R328	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R329	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R330	1-216-063-00	METAL CHIP	3.9K	5%	1/10W	
R331	1-216-063-00	METAL CHIP	3.9K	5%	1/10W	
R332	1-216-041-00	METAL CHIP	470	5%	1/10W	
R333	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R334	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R335	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R336	1-216-093-00	METAL CHIP	68K	5%	1/10W	
R337	1-216-033-00	METAL CHIP	220	5%	1/10W	
R338	1-216-025-00	METAL CHIP	100	5%	1/10W	
R339	1-216-063-00	METAL CHIP	3.9K	5%	1/10W	
R340	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R341	1-216-105-00	METAL CHIP	220K	5%	1/10W	
R342	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R343	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R344	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R347	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R348	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R349	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R350	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R351	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R352	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R353	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R401	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R404	1-216-091-00	METAL CHIP	56K	5%	1/10W	
R405	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R406	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R407	1-216-099-00	METAL CHIP	120K	5%	1/10W	
R408	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R409	1-216-748-11	METAL CHIP	39K	5%	1/10W	
R410	1-216-105-00	METAL CHIP	220K	5%	1/10W	
R411	1-216-049-00	METAL CHIP	1K	5%	1/10W	

SIGNAL

Ref. No.	Part No.	Description				Remark
R412	1-216-093-00	METAL CHIP	68K	5%	1/10W	
R414	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R415	1-216-091-00	METAL CHIP	56K	5%	1/10W	
R416	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R417	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R418	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R419	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R420	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R421	1-216-091-00	METAL CHIP	56K	5%	1/10W	
R422	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R423	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R424	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R425	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R426	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R427	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R428	1-216-011-00	METAL CHIP	27	5%	1/10W	
R429	1-216-298-00	METAL CHIP	2.2	5%	1/10W	
R430	1-216-011-00	METAL CHIP	27	5%	1/10W	
R431	1-216-298-00	METAL CHIP	2.2	5%	1/10W	
R432	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R433	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R434	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R435	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R436	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R437	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R438	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R439	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R440	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R441	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R442	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R443	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R444	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R445	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R446	1-216-105-00	METAL CHIP	220K	5%	1/10W	
R447	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R450	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R451	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R452	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R453	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R454	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R455	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R456	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R457	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R458	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R459	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R460	1-216-093-00	METAL CHIP	68K	5%	1/10W	
R461	1-216-105-00	METAL CHIP	220K	5%	1/10W	
R462	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R463	1-216-295-00	METAL CHIP	0	5%	1/10W	
R464	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R501	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R502	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R503	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R504	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R505	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R506	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R507	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R508	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R509	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R511	1-216-033-00	METAL CHIP	220	5%	1/10W	
R512	1-216-033-00	METAL CHIP	220	5%	1/10W	
R513	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R514	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R515	1-216-013-00	METAL CHIP	33	5%	1/10W	
R516	1-216-017-00	METAL CHIP	47	5%	1/10W	
R517	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R518	1-216-033-00	METAL CHIP	220	5%	1/10W	
R519	1-216-091-00	METAL CHIP	56K	5%	1/10W	
R520	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R521	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R522	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R523	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R524	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R525	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R526	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R527	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R528	1-216-039-00	METAL CHIP	390	5%	1/10W	
R529	1-216-017-00	METAL CHIP	47	5%	1/10W	
R530	1-216-013-00	METAL CHIP	33	5%	1/10W	
R531	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R532	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R533	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R534	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R704	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R705	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R706	1-216-093-00	METAL CHIP	68K	5%	1/10W	
R707	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	

< VARIABLE RESISTOR >

Ref. No.	Part No.	Description	Remark
RV301	1-238-994-11	RES, ADJ, METAL GLAZE 100K	
RV401	1-238-992-11	RES, ADJ, METAL GLAZE 22K	
RV402	1-241-534-11	RES, VAR, CARBON 100K/100K	
RV403	1-241-534-11	RES, VAR, CARBON 100K/100K	
RV404	1-241-533-11	RES, VAR, SLIDE 20K/20K	

Ref. No.	Part No.	Description	Remark
		< TRANSFORMER >	
T1	1-402-559-11	COIL (ANT)	
T2	1-402-560-11	COIL (ANT)	
T3	1-402-561-11	COIL (ANT)	
T4	1-402-562-11	COIL (ANT)	
T5	1-402-563-11	COIL (ANT)	
T8	1-426-357-11	TRANSFORMER, RF	
T9	1-426-560-11	TRANSFORMER, HIGH-FREQUENCY	
T251	1-402-558-11	COIL (ANT)	
T252	1-426-559-11	COIL (RF)	
T253	1-404-966-11	TRANSFORMER, MIDWAY-FREQUENCY	
T301	1-404-965-11	TRANSFORMER, MIDWAY-FREQUENCY	
T701	1-450-531-21	TRANSFORMER, DC-DC CONVERTER	
		< VIBRATOR, CERAMIC >	
X301	1-579-339-11	VIBRATOR, LITHIUM TANTALATE 3750KHz	
X302	1-567-385-11	OSCILLATOR, CRYSTAL 55.39MHz	
X501	1-567-386-11	OSCILLATOR, CRYSTAL 6.275MHz	
		< FILTER >	
XF301	1-527-372-00	FILTER, CRYSTAL	
XF302	1-527-372-00	FILTER, CRYSTAL	

****

TUNE BOARD
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		< CAPACITOR >	
C101	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V	
C102	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V	
C103	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C104	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V	
		< CONNECTOR >	
CN101	1-563-309-11	CONNECTOR, BOARD TO BOARD 7P	
CN102	* 1-563-310-11	CONNECTOR, BOARD TO BOARD 8P	
		< DIODE >	
D101	8-719-951-05	DIODE KV1560	
D102	8-719-951-05	DIODE KV1560	
		< IC >	
IC101	8-759-720-23	IC AK93C57F	
IC102	8-759-925-74	IC SN74HC04ANS	
IC103	8-759-032-59	IC MC74HC595AF	
IC104	8-759-939-41	IC S-81230AG-RB	
IC105	8-759-929-21	IC TLC27L2CPS	

Ref. No.	Part No.	Description	Remark
		< RESISTOR >	
R101	1-216-699-11	METAL CHIP 100K 0.5% 1/10W	
R102	1-216-682-11	METAL CHIP 20K 0.5% 1/10W	
R103	1-216-675-11	METAL CHIP 10K 0.5% 1/10W	
R104	1-216-682-11	METAL CHIP 20K 0.5% 1/10W	
R105	1-216-675-11	METAL CHIP 10K 0.5% 1/10W	
R106	1-216-682-11	METAL CHIP 20K 0.5% 1/10W	
R107	1-216-682-11	METAL CHIP 20K 0.5% 1/10W	
R108	1-216-682-11	METAL CHIP 20K 0.5% 1/10W	
R109	1-216-682-11	METAL CHIP 20K 0.5% 1/10W	
R110	1-216-682-11	METAL CHIP 20K 0.5% 1/10W	
R111	1-216-682-11	METAL CHIP 20K 0.5% 1/10W	
R112	1-216-682-11	METAL CHIP 20K 0.5% 1/10W	
R113	1-216-682-11	METAL CHIP 20K 0.5% 1/10W	
R114	1-216-682-11	METAL CHIP 20K 0.5% 1/10W	
R115	1-216-682-11	METAL CHIP 20K 0.5% 1/10W	
R116	1-216-682-11	METAL CHIP 20K 0.5% 1/10W	
R117	1-216-675-11	METAL CHIP 10K 0.5% 1/10W	
R118	1-216-675-11	METAL CHIP 10K 0.5% 1/10W	
R119	1-216-675-11	METAL CHIP 10K 0.5% 1/10W	
R120	1-216-675-11	METAL CHIP 10K 0.5% 1/10W	
R121	1-216-675-11	METAL CHIP 10K 0.5% 1/10W	
R122	1-216-675-11	METAL CHIP 10K 0.5% 1/10W	
R123	1-216-675-11	METAL CHIP 10K 0.5% 1/10W	
R124	1-216-699-11	METAL CHIP 100K 0.5% 1/10W	
R125	1-216-697-11	METAL CHIP 82K 0.5% 1/10W	
R126	1-216-675-11	METAL CHIP 10K 0.5% 1/10W	
R127	1-216-699-11	METAL CHIP 100K 0.5% 1/10W	
R128	1-216-697-11	METAL CHIP 82K 0.5% 1/10W	
R129	1-216-689-11	METAL CHIP 39K 0.5% 1/10W	
R130	1-216-699-11	METAL CHIP 100K 0.5% 1/10W	
R132	1-216-699-11	METAL CHIP 100K 0.5% 1/10W	
R133	1-216-699-11	METAL CHIP 100K 0.5% 1/10W	
R134	1-216-699-11	METAL CHIP 100K 0.5% 1/10W	
R135	1-216-699-11	METAL CHIP 100K 0.5% 1/10W	
R136	1-216-049-00	METAL CHIP 1K 5% 1/10W	
		< THERMISTOR >	
TH101	1-808-656-11	THERMISTOR	

****

MISCELLANEOUS
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70	* 1-535-903-11	CONDUCTIVE BOARD, CONNECTION	
ANT1	1-501-505-11	ANTENNA, ETLESCOPIC	
SP101	1-544-498-11	SPEAKER	
SW800	1-466-537-11	ENCODER, ROTARY	

- EA: Saudi Arabia
  IT: Italian
  AE: AEP
  AU: Australian
  FR: French
  AE4: Germany

ACCESSORIES & PACKING MATERIALS
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Ref. No.	Part No.	Description	Remark
	A-3604-167-A	COMPACT ANTENNA AN-71	
⚠	1-465-775-11	ADAPTOR, AC (1AE1, 1AE2, 2AE2, 1E2, 1E4, 2AE4, 1FR, 4IT, 3EA)	
⚠	1-465-846-11	ADAPTOR, AC (CA)	
⚠	1-465-847-11	ADAPTOR, AC (1UK)	
⚠	1-465-953-11	ADAPTOR, AC (US)	
	1-557-787-11	CONNECTOR, CONNECTION	
⚠	1-569-008-11	ADAPTER, CONVERSION 2P (1AE1, 1AE2, 2AE2, 1E2, 1E4, 2AE4, 1FR, 4IT, 3EA)	
⚠	1-573-856-11	ADAPTOR, CHANGE (CA)	
	3-367-445-11	HAND BOOK	
*	3-371-755-01	INDIVIDUAL CARTON	
*	3-371-757-01	CUSHION (RIGHT LEFT)	
	3-371-911-01	BELT, CARRYING	
	3-753-627-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, SWEDISH, PORTUGUESE) (US, 1AE1, 2AE2, 1UK, 1E2, 1E4, 1FR)	
	3-753-627-21	MANUAL, INSTRUCTION (ENGLISH, FRENCH, GERMAN, DUTCH, ITALIAN) (CA, 1AE2, 2AE4, 4IT, 1AU)	
	3-753-627-51	MANUAL, INSTRUCTION (ENGLISH, ARABIC) (3EA)	
	3-753-877-11	LIST, FREQUENCY (1AE1, 1AE2, 2AE2, 1UK, 2AE4, 1FR, 4IT)	
	3-753-877-21	LIST, FREQUENCY (US, CA)	
	3-753-877-31	LIST, FREQUENCY (1E2, 1E4, 3EA)	
	3-893-802-07	BOOK, GUIDE, WAVE	
	8-953-314-90	HEADPHONE MDR-E757 SET (1UK)	
	8-953-314-95	HEADPHONE MDR-E757/BK SET (EXCEPT 1UK)	
	X-3321-270-1	ATTACHMENT	

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HARDWARE LIST

#1	7-682-149-15	SCREW +P 3X10
#2	7-685-154-19	SCREW +P 3X35 TYPE2 NON-SLIT
#3	7-685-546-14	SCREW +BTP 3X8 TYPE2 N-S

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	**Note:** Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le neméro spécifié.

English
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